

Heavy Rain Event

BC South Coast and Southern Interior

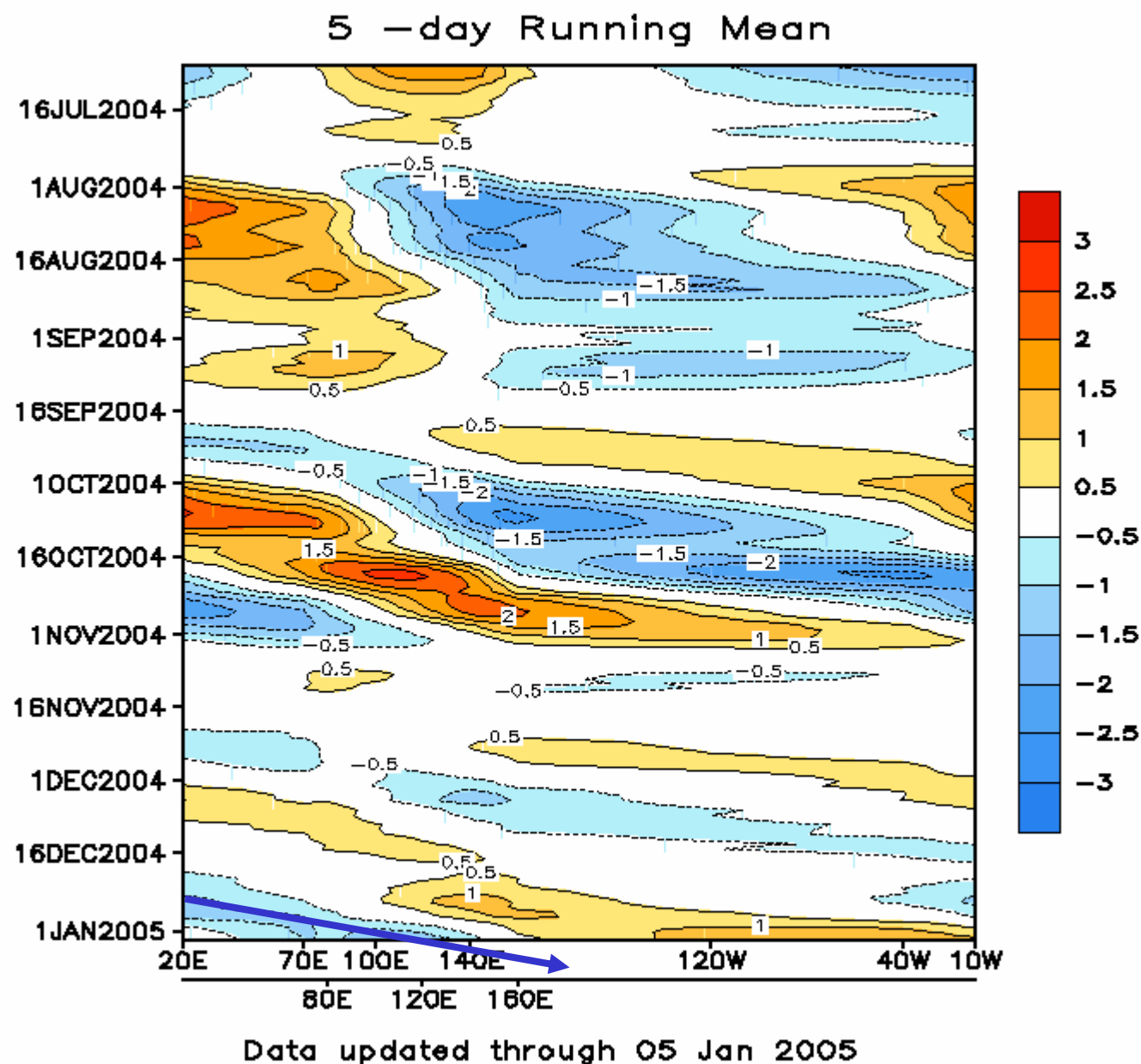
17 to 22 January 2005

Doug McCollor

Wednesday 5Jan05

During the last half of December the MJO strengthened, as enhanced convection and precipitation over the Indian Ocean shifted eastward across Indonesia.

By early January 2005, enhanced convection began to extend into the western tropical Pacific. The pattern of enhanced convection was to be closely monitored over the next several weeks as it shifted eastward over the abnormally warm waters in the central equatorial Pacific.



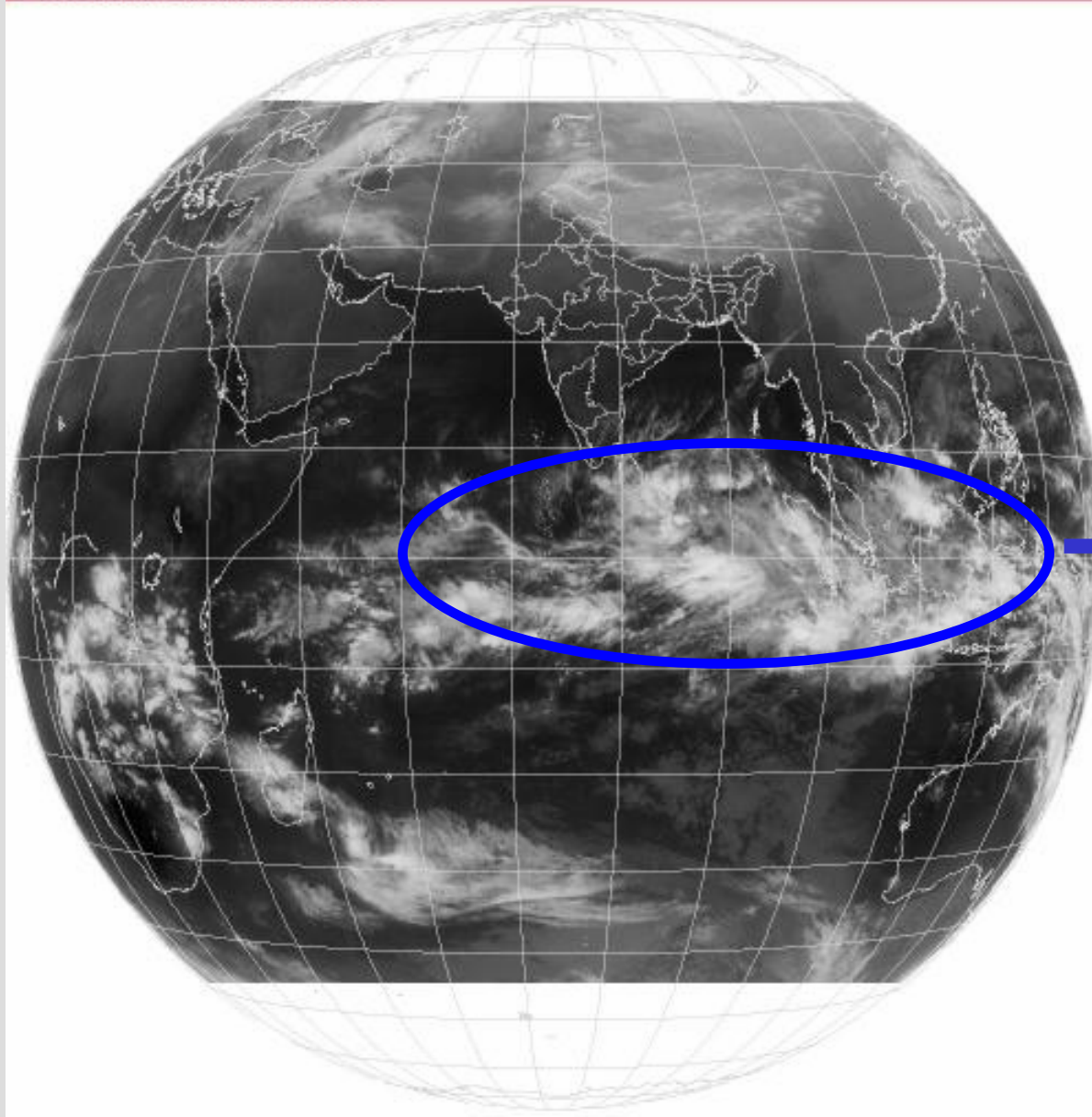
Wed 5Jan05

Proj:None
GLOBE_IR

2005-01-05 17:00:53

Sat:Kalpana-1
Res:8.0 km

TIR No Enhancement



MJO

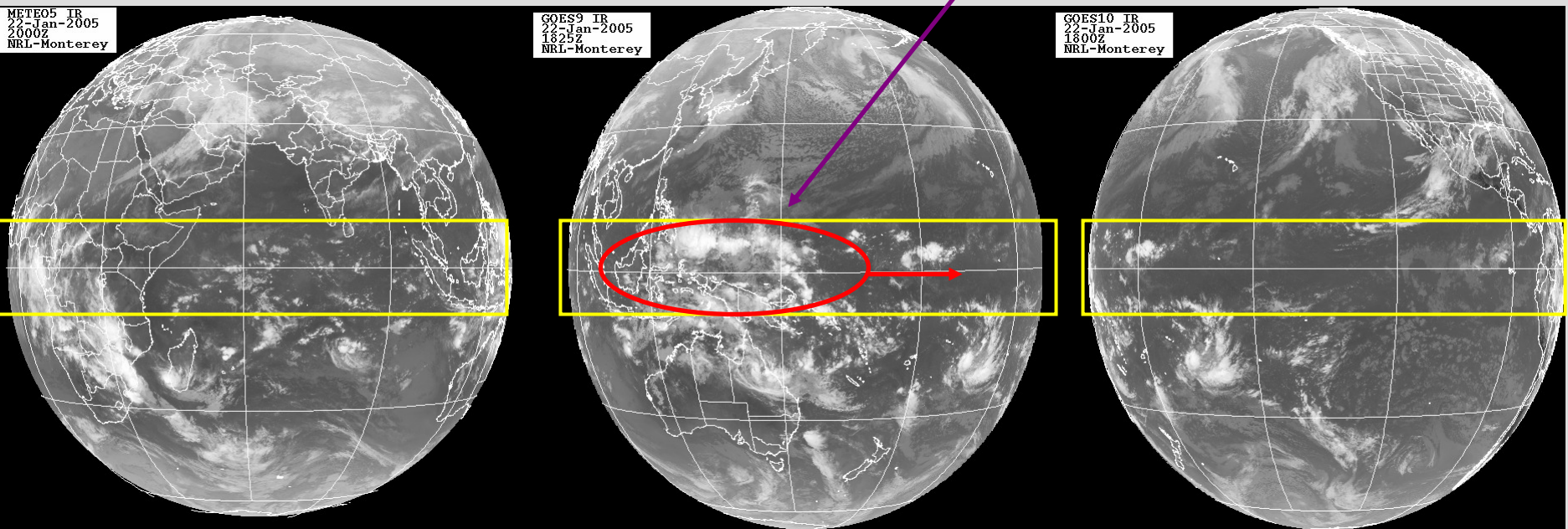
Slide that shows explanation of Madden-Julian Oscillation

Madden-Julian Oscillation

Indian Ocean

West Pacific

East Pacific



ITCZ

ANALYSE	500 hPa GEM HEIGHT-HAUTEUR / 1000-500 hPa THICKNESS-EPAISSEUR										
REGIONAL	HEIGHT - HAUTEUR					THICKNESS - EPAISSEUR					
	8	12	16	20	24	8	12	16	20	24	
	540	540	546	552	540	534	540	546	540	534	
	dam					dam					534s ΔZ s540

ENVIRONNEMENT CANADA
CMC ENVIRONNEMENT CANADA
ANAL 500 hPa
12Z WED-MER 12 JAN-JAN 05
R1PLSA1 12 MUR

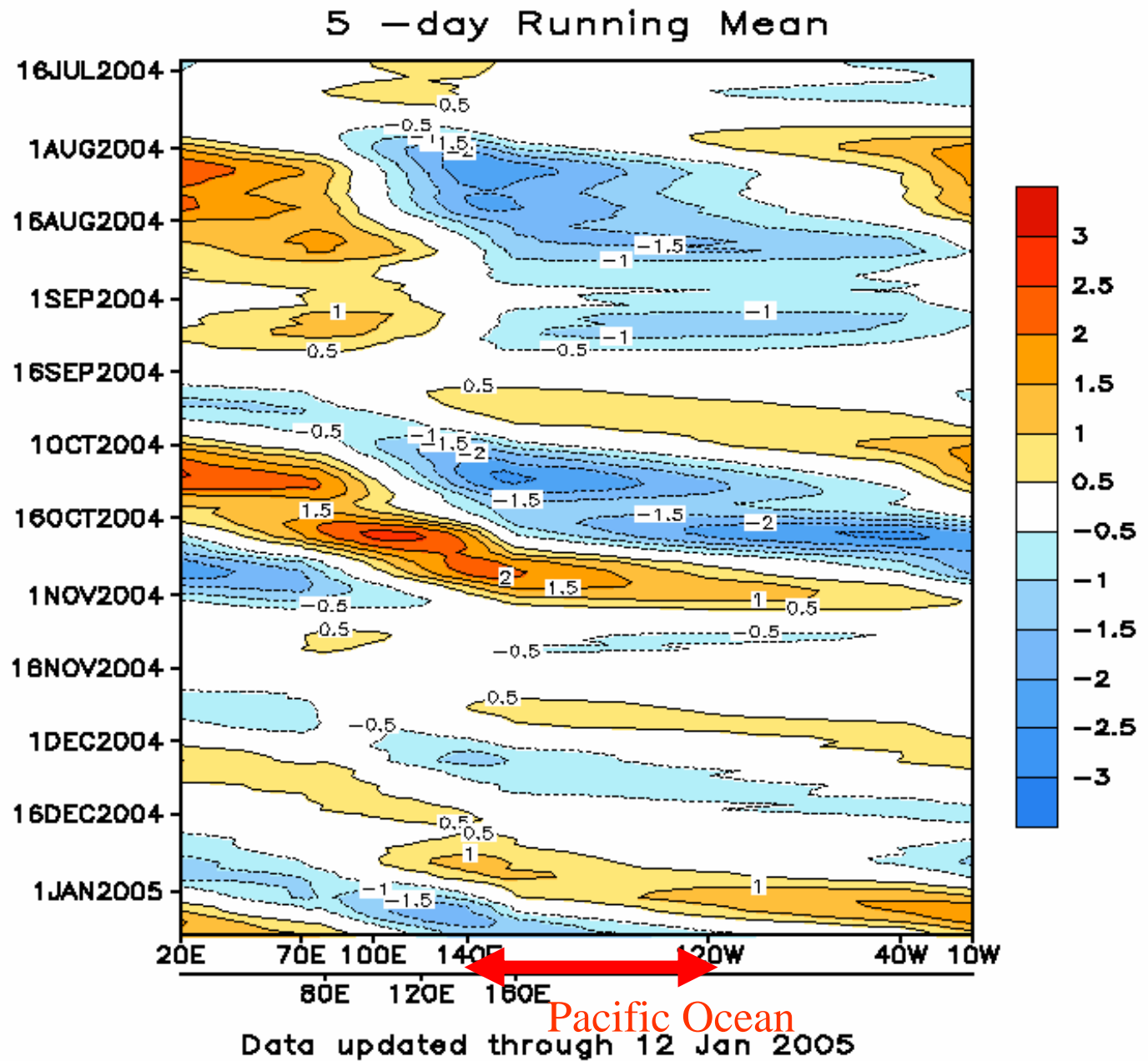
Meanwhile at the same time in California..

Rain lashed water-logged Southern California, hampering efforts to find survivors buried by a mud slide in a coastal community and prompting the entire town of Piru (2,000 people) to evacuate before rain-swollen Lake Piru spills over a dam. "Lake Piru is filling faster than it's releasing water," said Rod Megli, division chief for the Ventura County Fire Department. "That volume of water could affect a number of residents. We'd rather be safe than sorry."

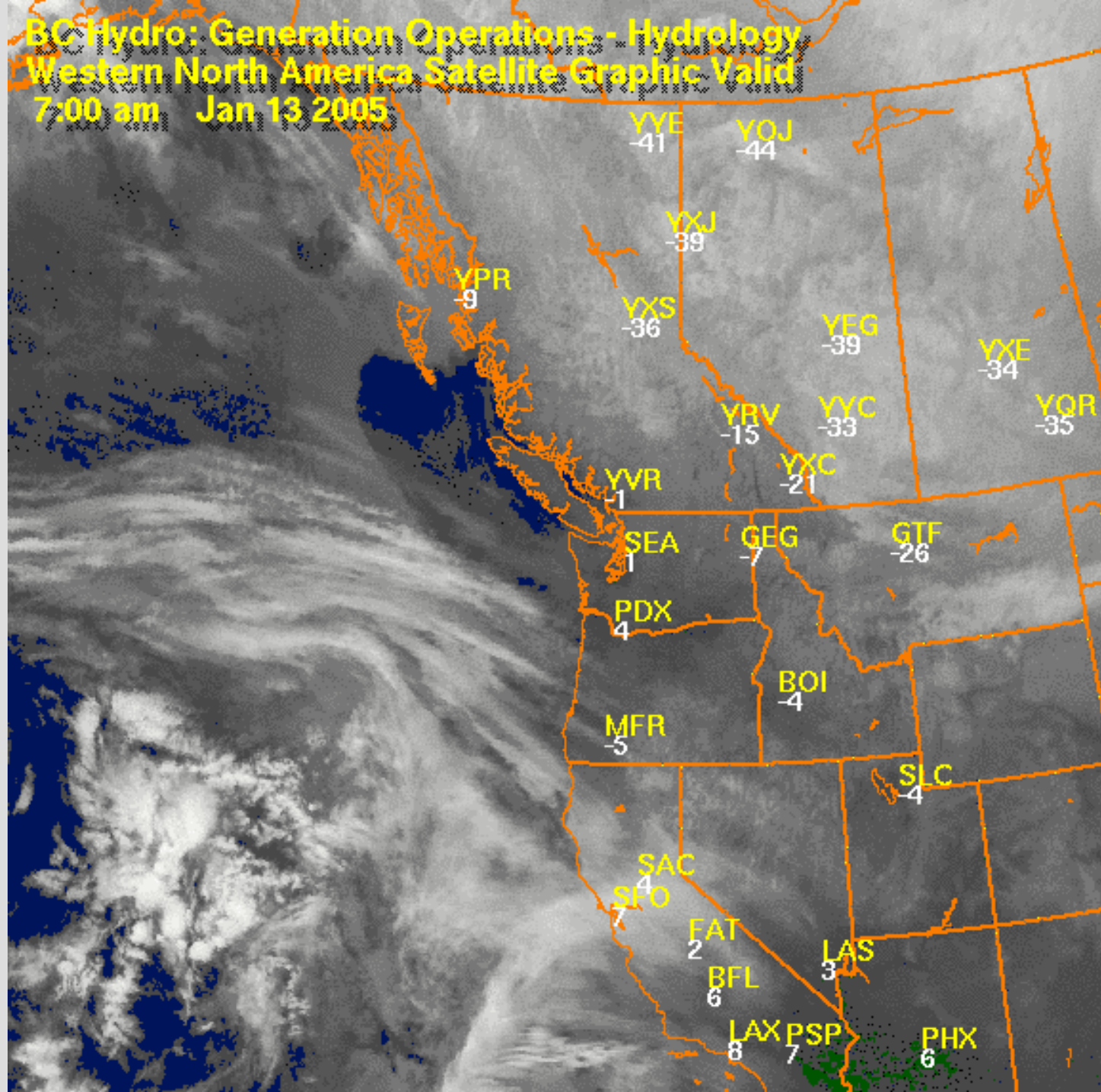
The NWS said Tuesday that downtown Los Angeles had recorded its wettest 15 consecutive days on record, with a total of 17 inches of rain falling in the period ending Monday.



Wed 12 Jan 05



BC Hydro: Generation Operations - Hydrology
Western North America Satellite Graphic Valid
7:00 am Jan 13 2005



Thu 13 Jan 05

weather.msfc.nasa.gov

13 Jan 2005
12:15 UTC

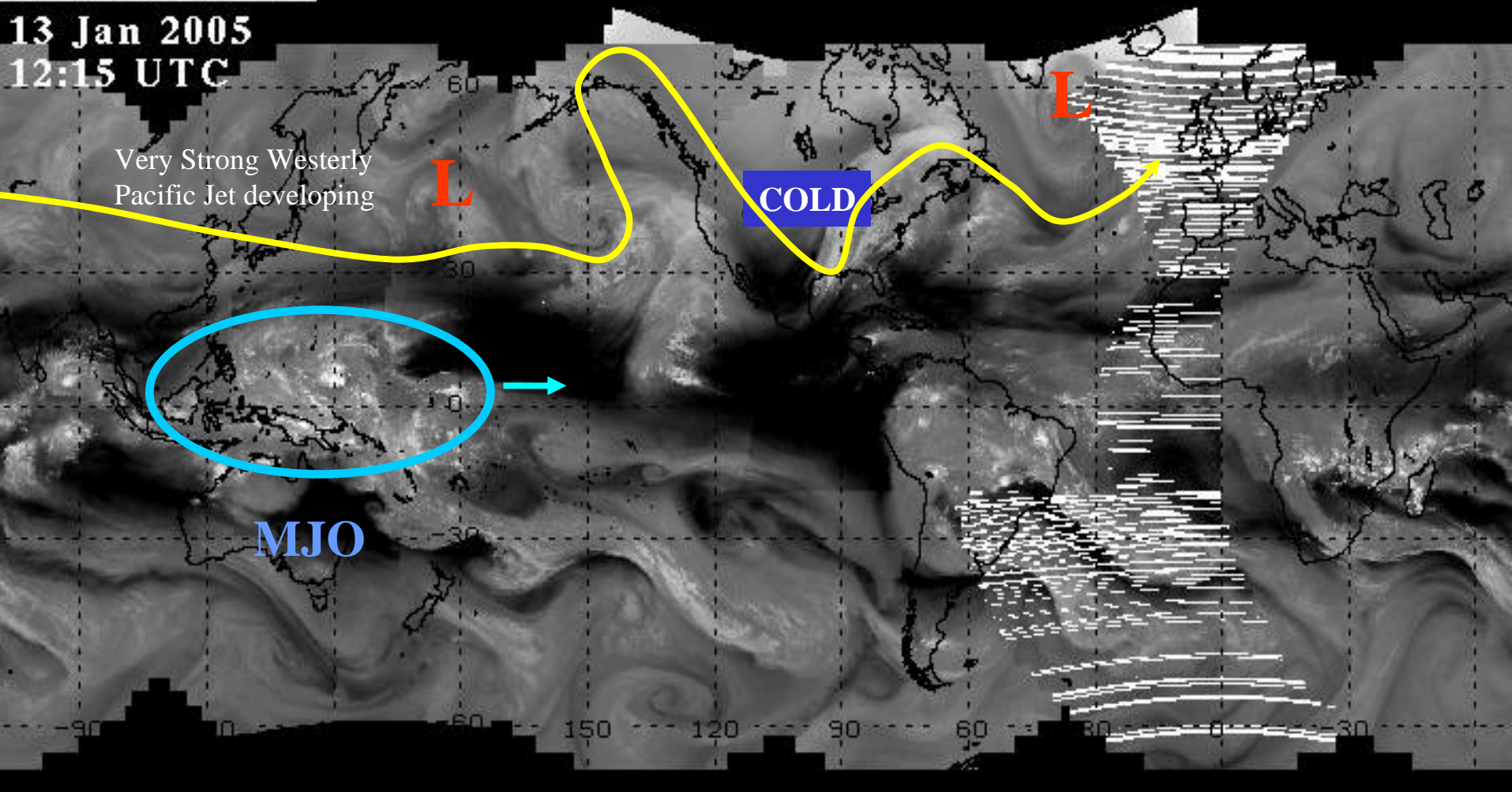
Very Strong Westerly
Pacific Jet developing

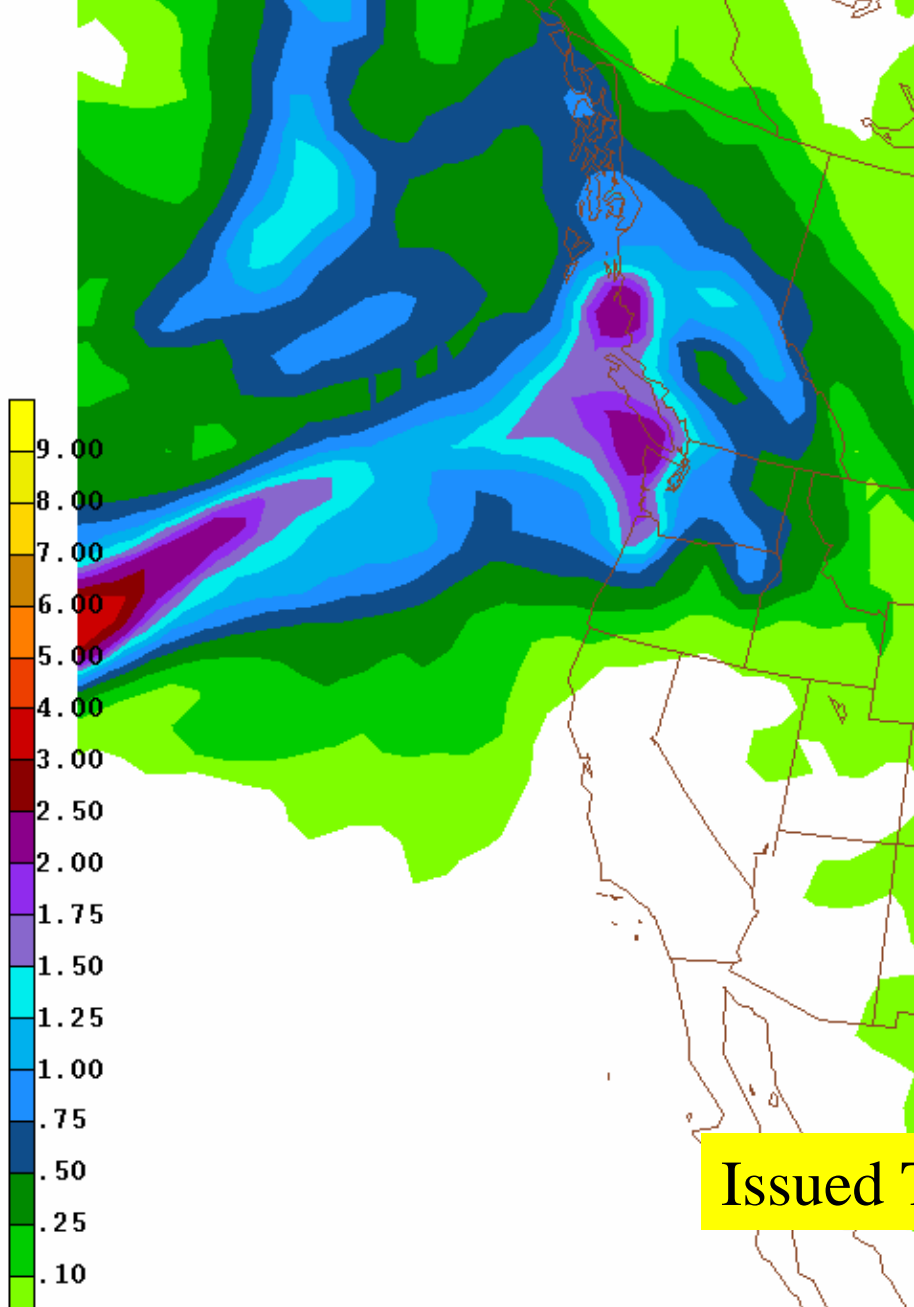
L

COLD

L

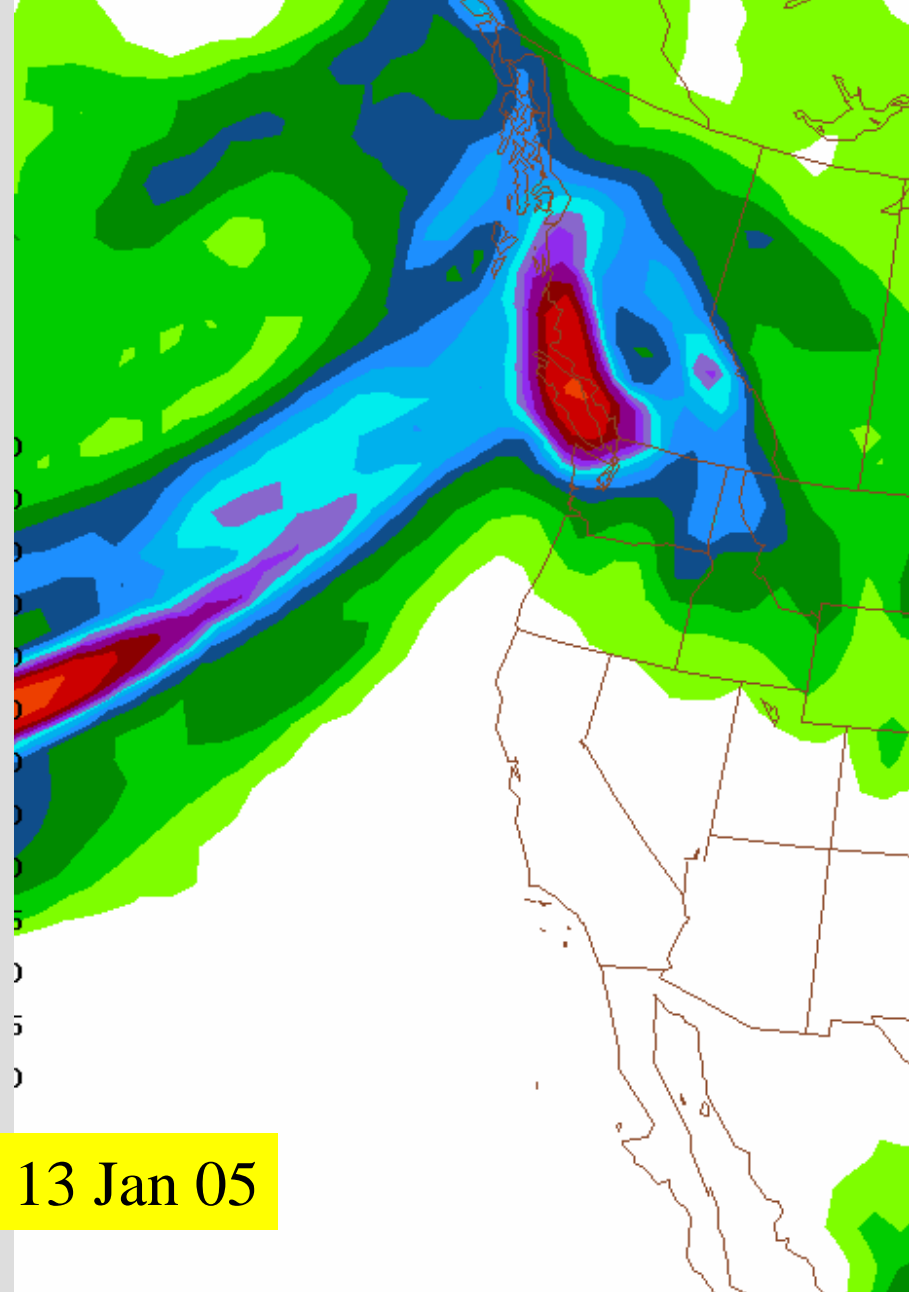
MJO





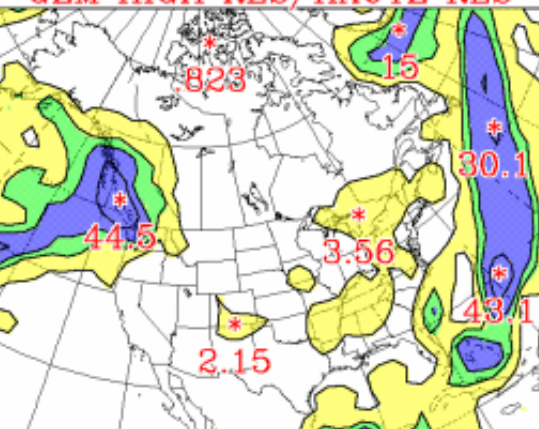
Issued Thu 13 Jan 05

**6 Day Forecast (48hr Pcpn Total)
Valid 10am Tue 18Jan**

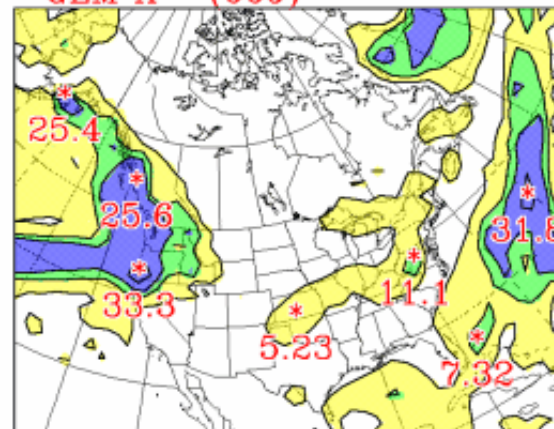


**8 Day Forecast (48hr Pcpn Total)
Valid 10am Thu 20Jan**

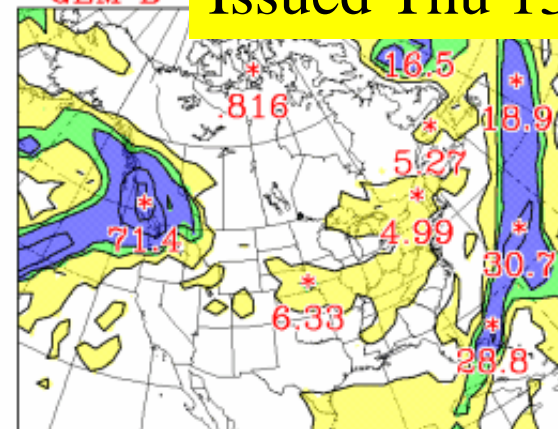
GEM HIGH RES/HAUTE RES



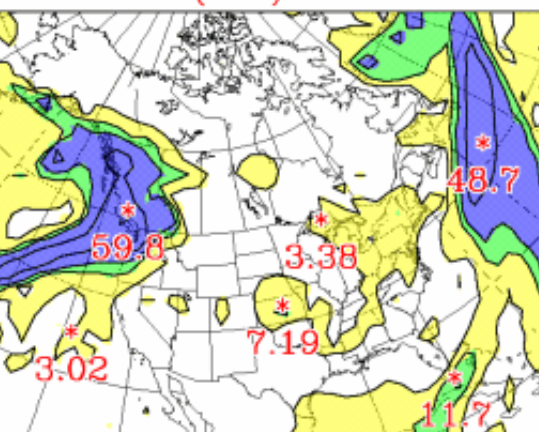
GEM A (009)



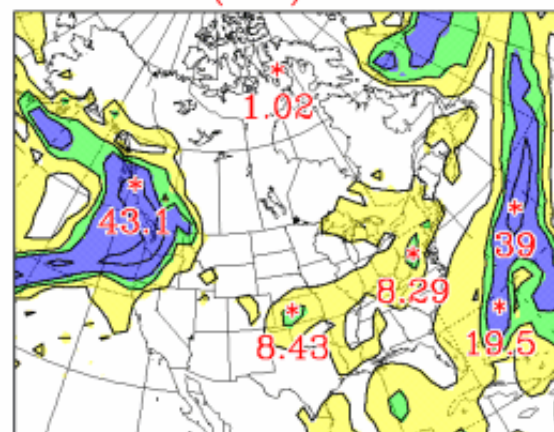
GEM B



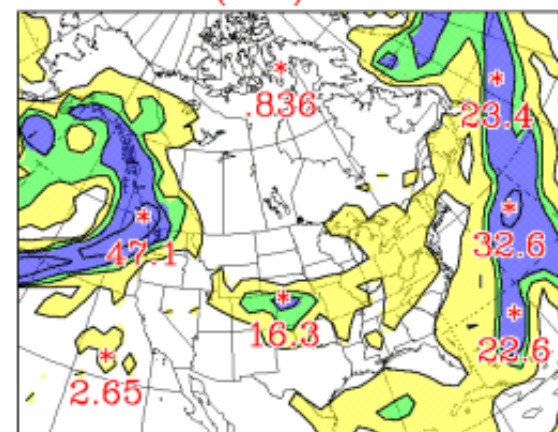
GEM C (011)



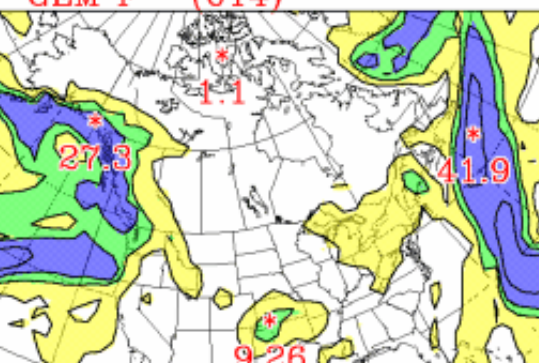
GEM D (012)



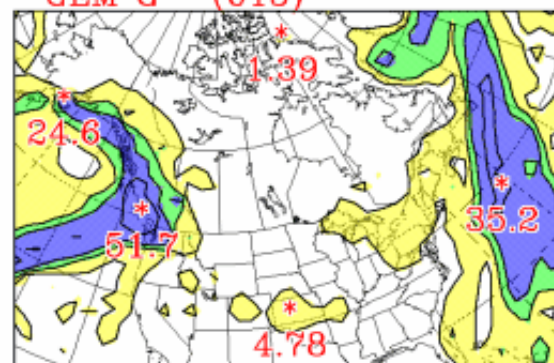
GEM E (013)



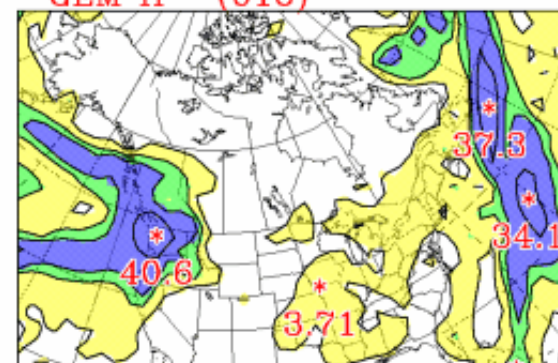
GEM F (014)

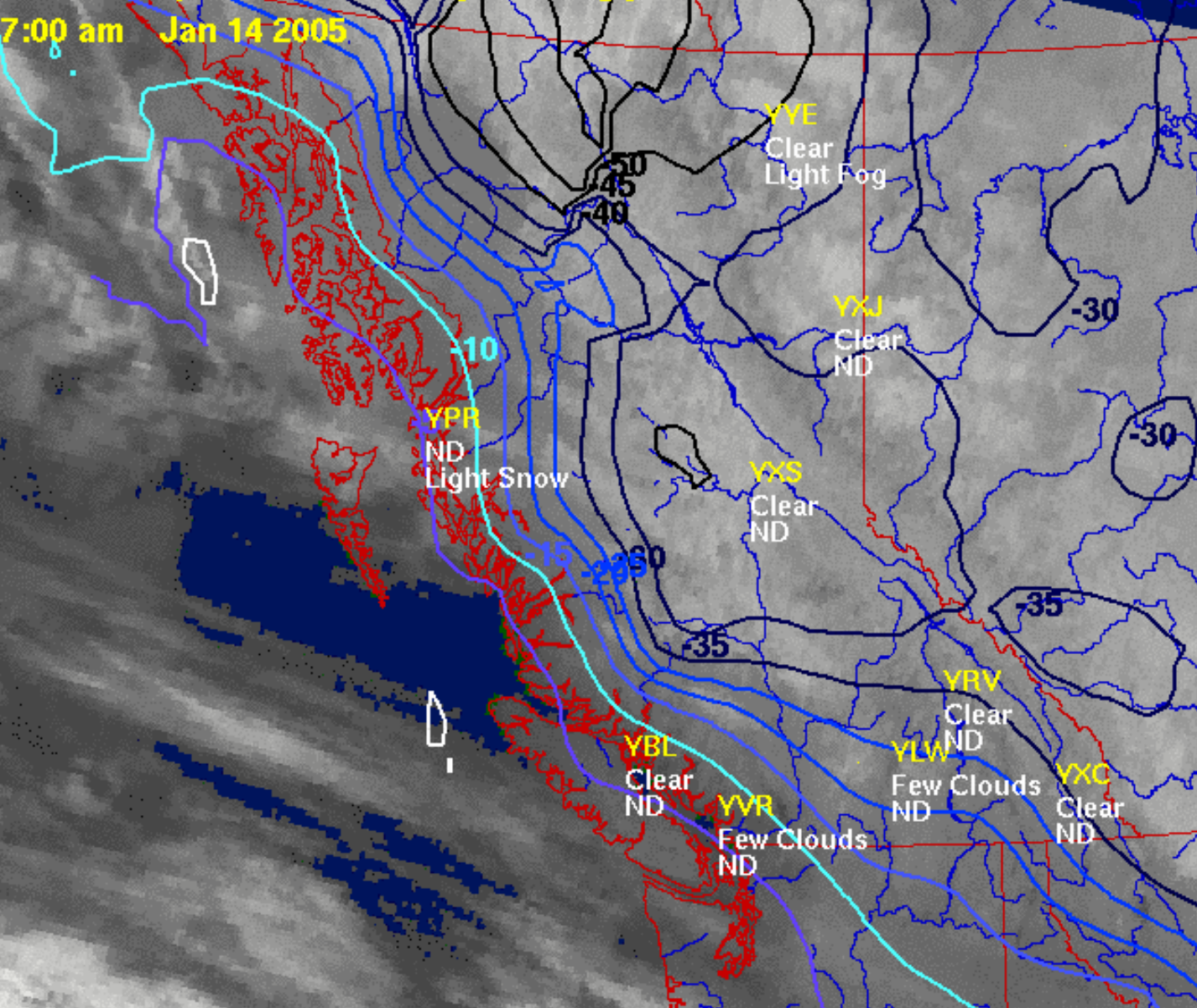


GEM G (015)



GEM H (016)





Coldest Temperature
past 6 hours

Watson Lake YT -48

Mayo YT -51

Fort Nelson -41

TPR AB -32

Fort St John -35

Prince George -41

Kelowna -28

Calgary -31

Edmonton -30

Hope -13

Abbotsford -7

Pitt Meadows -12

Vancouver
downtown -5

Vancouver Airport -9

Whistler -17

Victoria -6

Campbell River -13

Tofino -4

Current Temperatures

Seattle -1

Spokane -16

Portland -1

Saskatoon -39

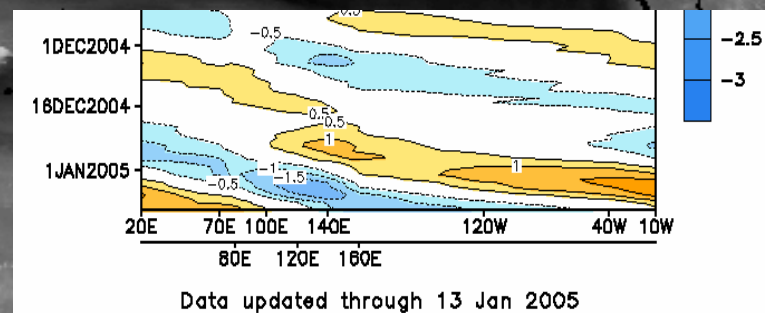
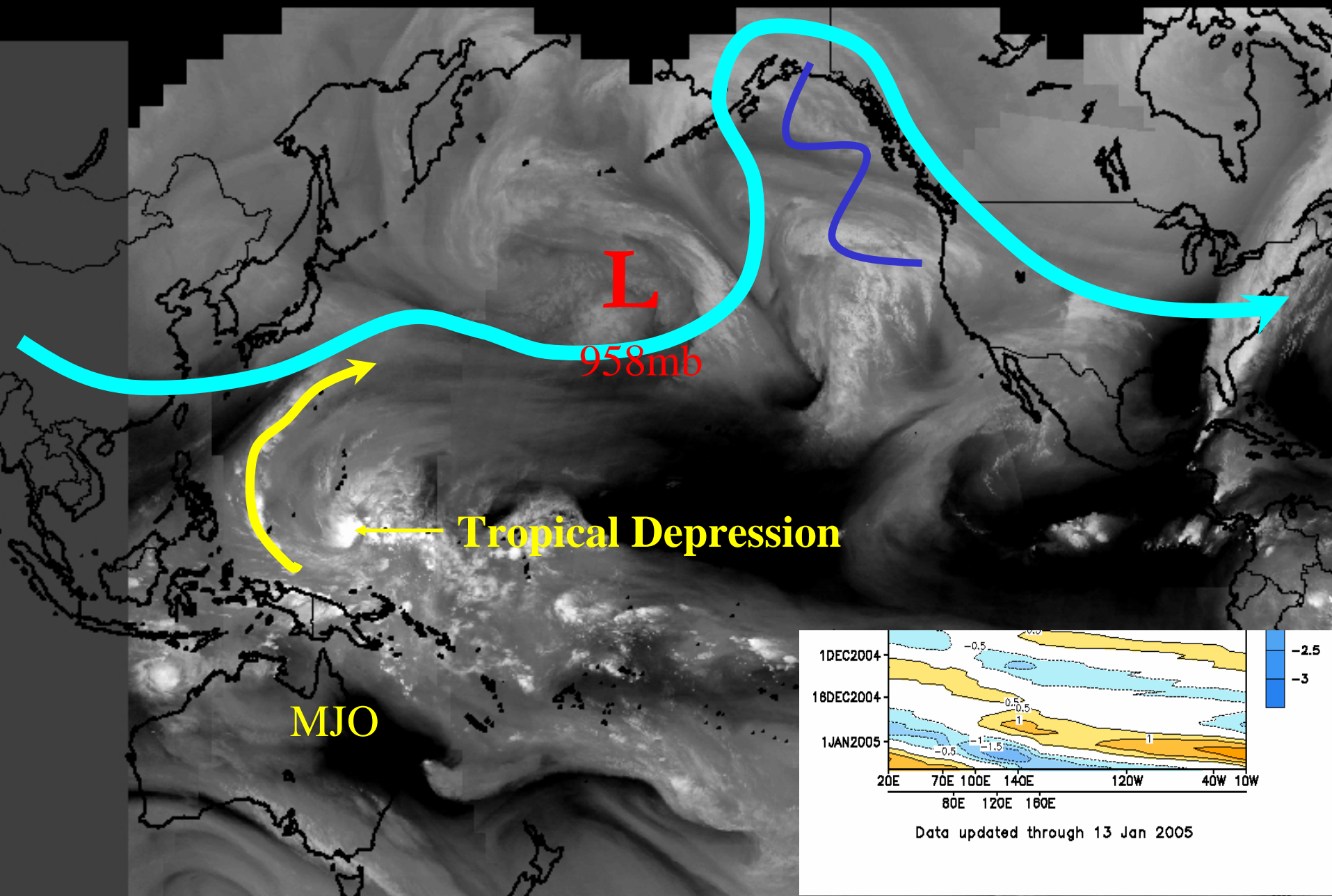
Winnipeg -29

Toronto -5

Fredericton NB +14 (falling to -10 tonight)

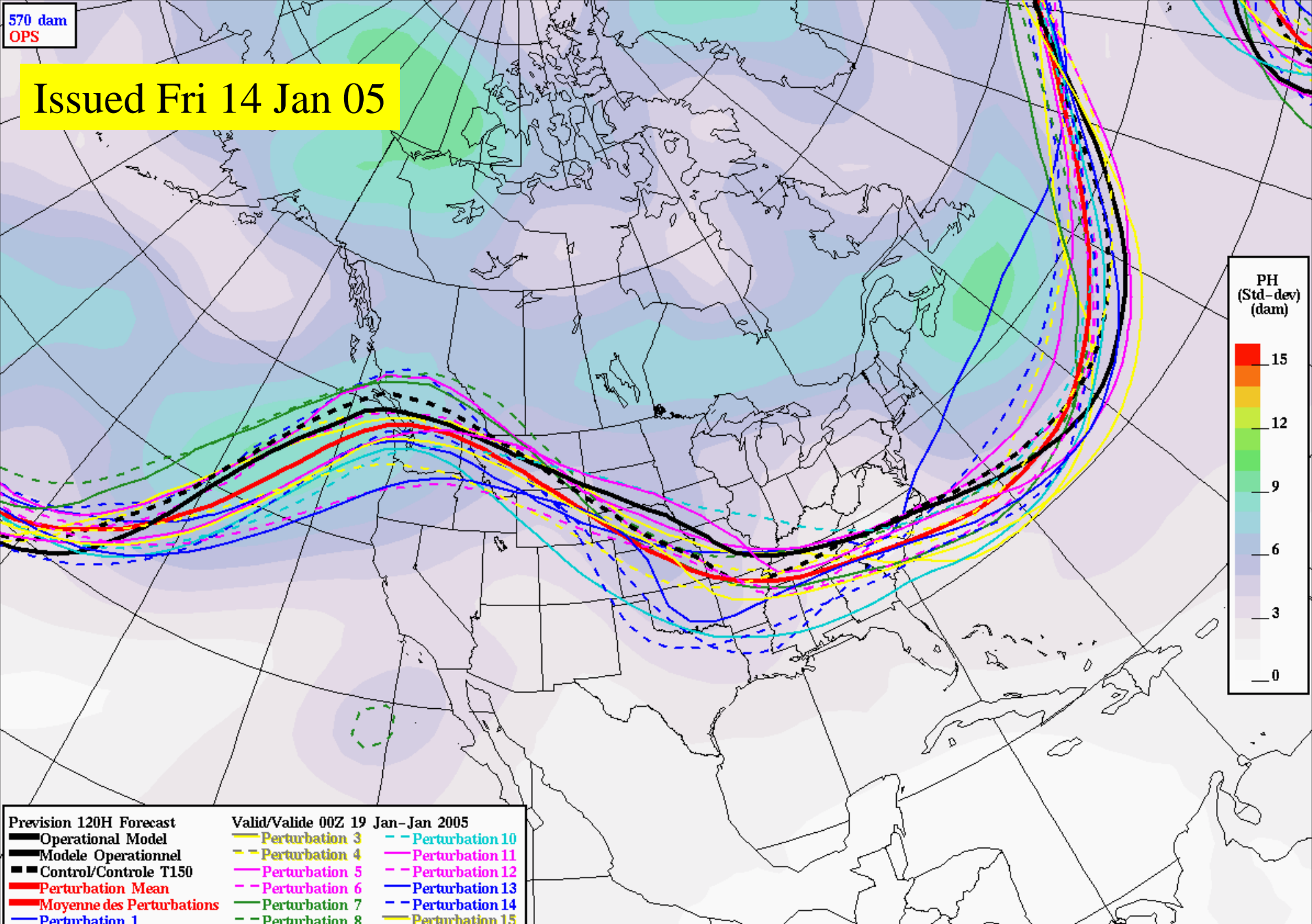
Halifax +9 (falling to -4 tonight)

14 Jan 2005
15:45 UTC



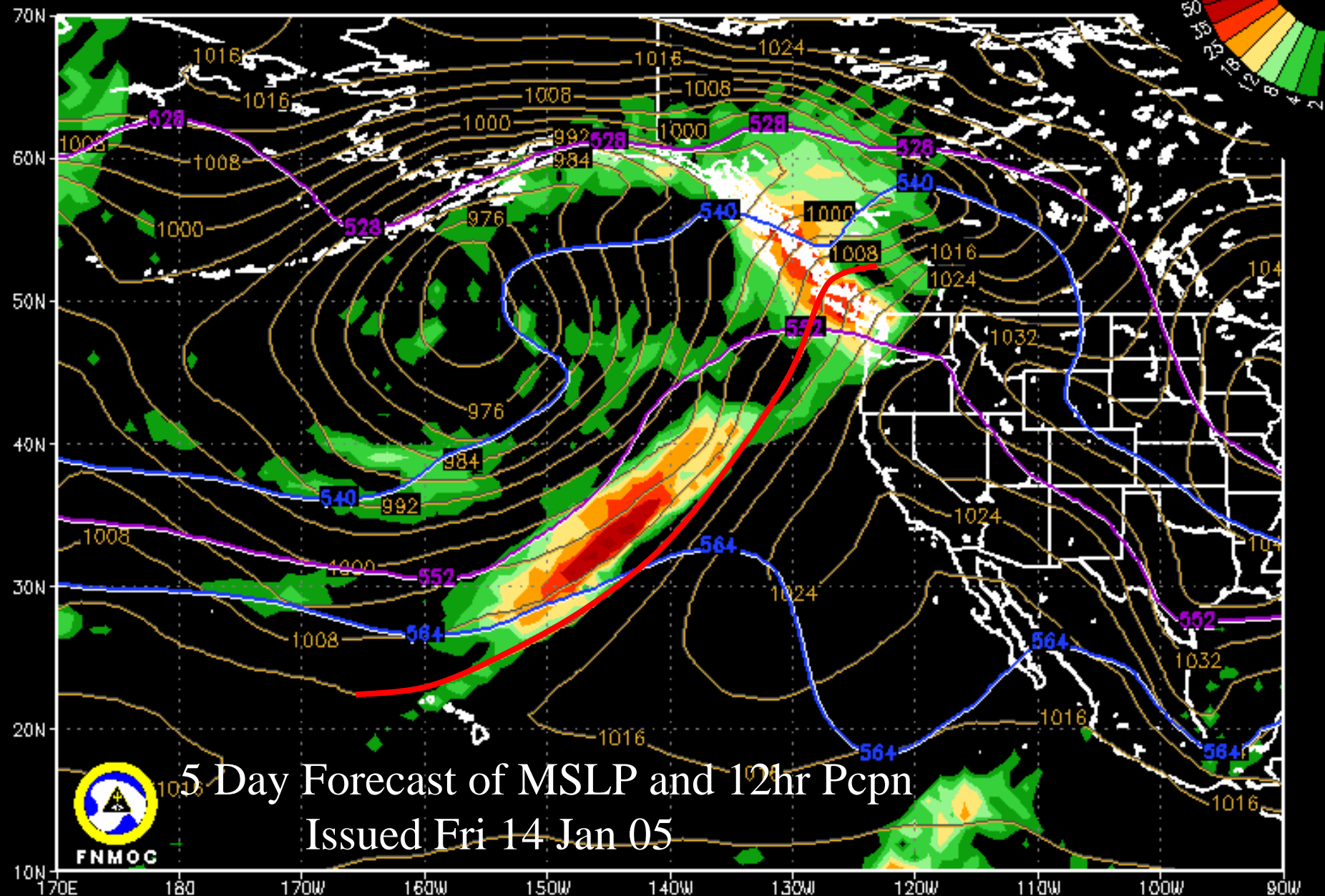
570 dam
OPS

Issued Fri 14 Jan 05



5 Day Ensemble Forecast (5700m Ht) Valid 4pm Tue 18Jan

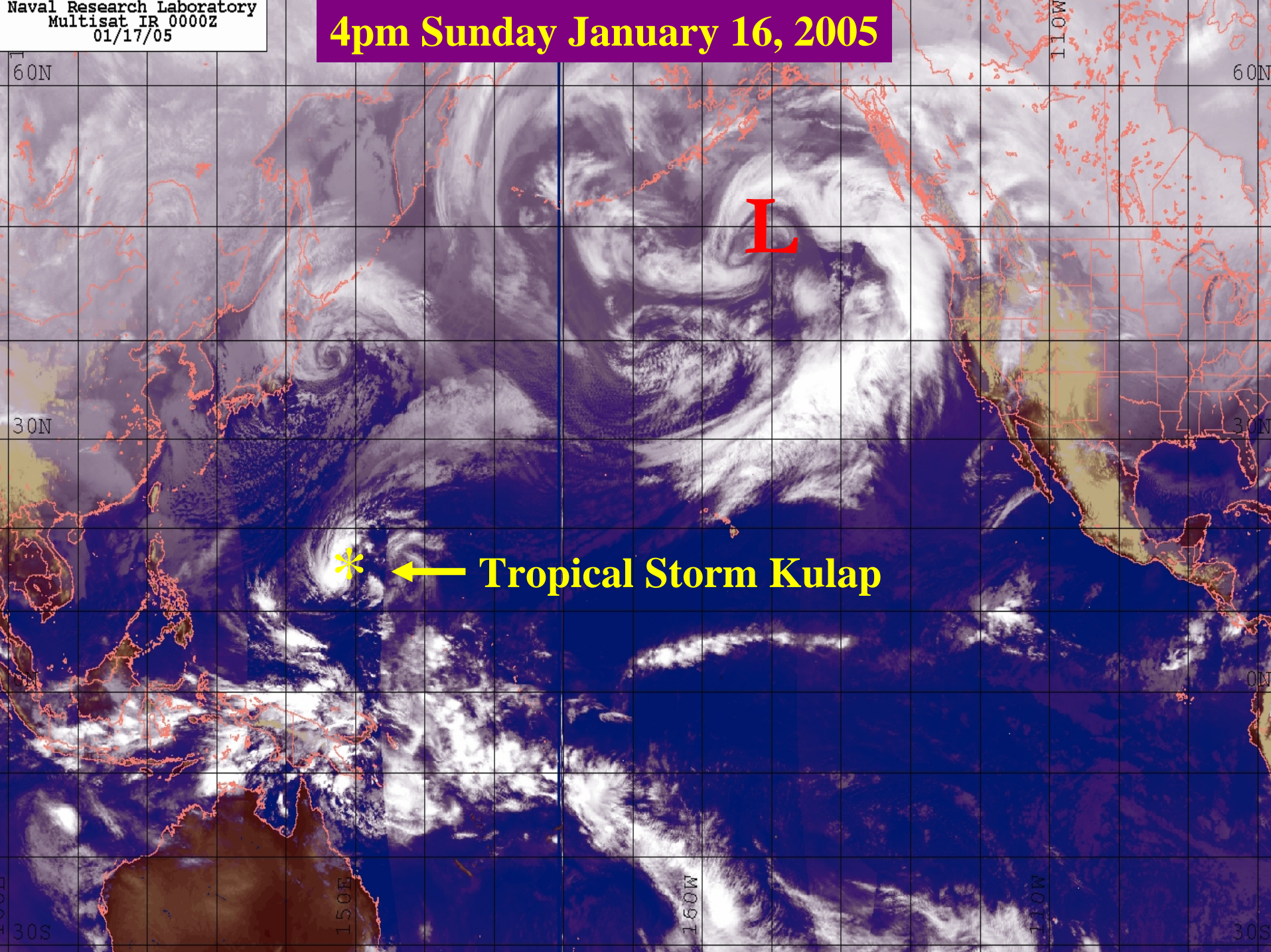
FNMOG NOGAPS 2005011412 run 1.0° Fields $\tau = 84$ h



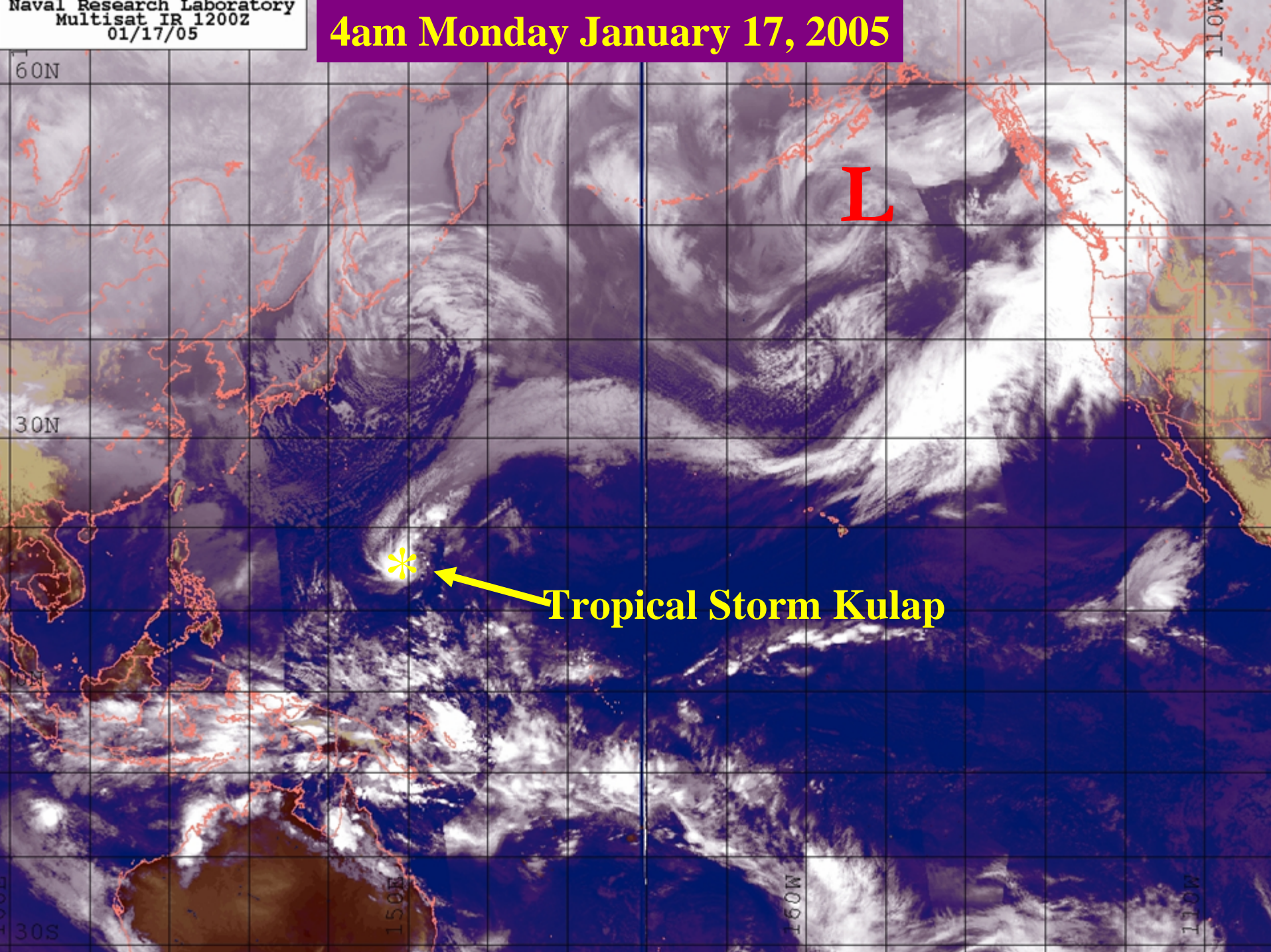
VT: Tue 00Z 18 JAN 05 SLP [hPa]/540,528 thk Line/Prev 12hr Prop Rate [mm/12hr]

NOGAPS Data Courtesy of Fleet Numerical Meteorology and Oceanography Center, Monterey, CA
GRADS (<http://grads.igra.org/grads>) Graphics by D.J.Laws FNMOG Code 511 (dlaws@fnmoc.navy.mil)

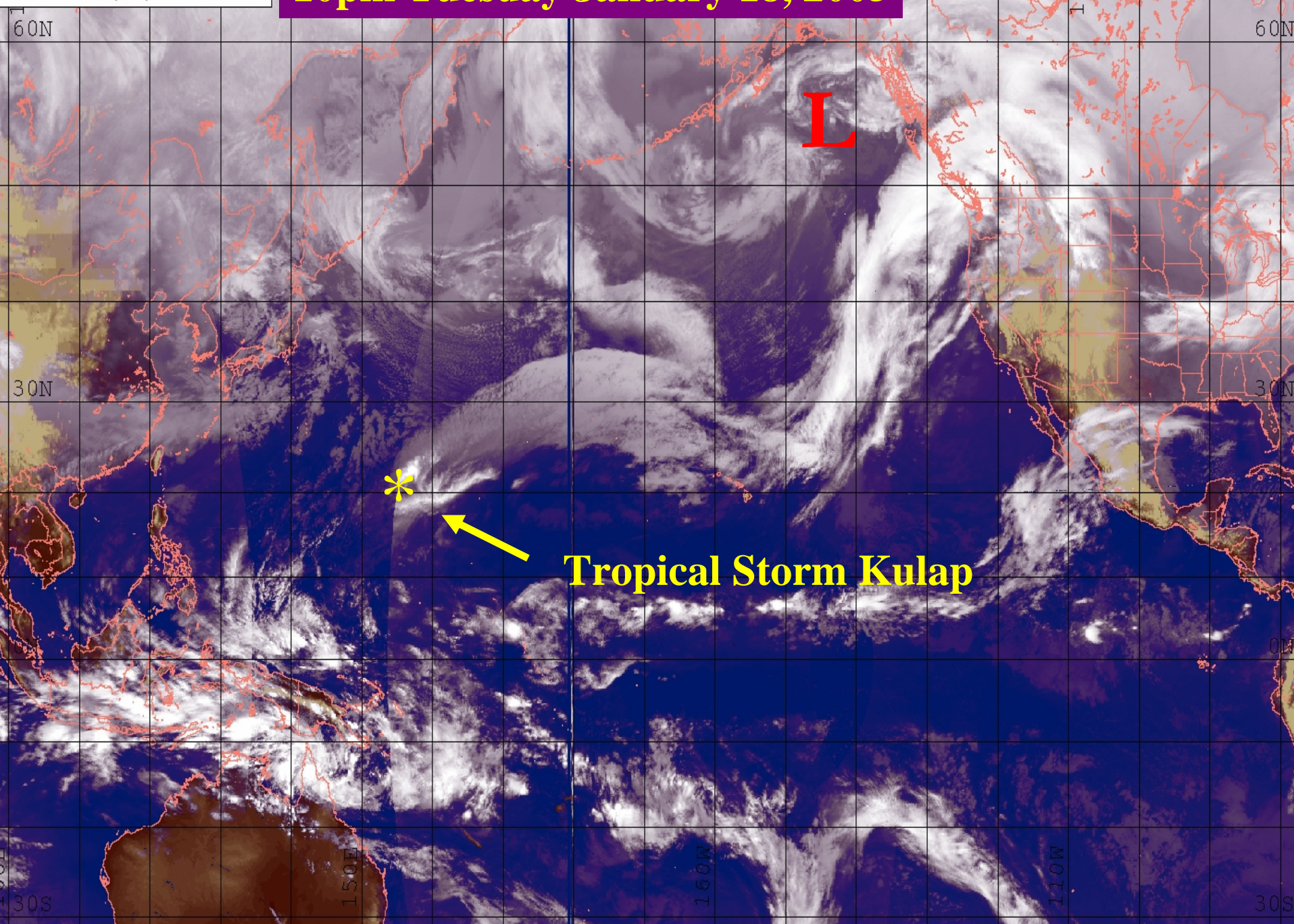
4pm Sunday January 16, 2005



4am Monday January 17, 2005



10pm Tuesday January 18, 2005



7pm Thursday January 20, 2005

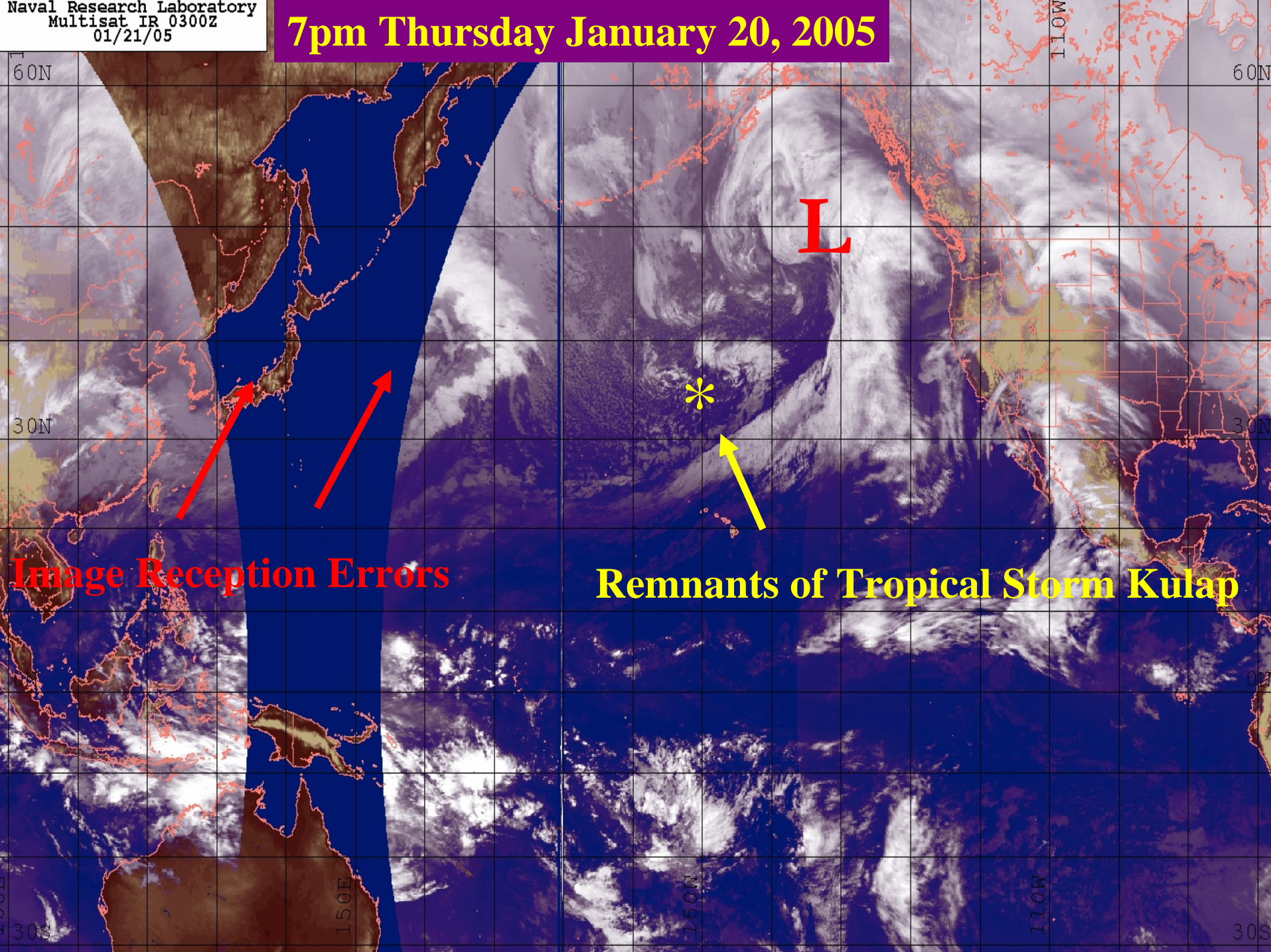
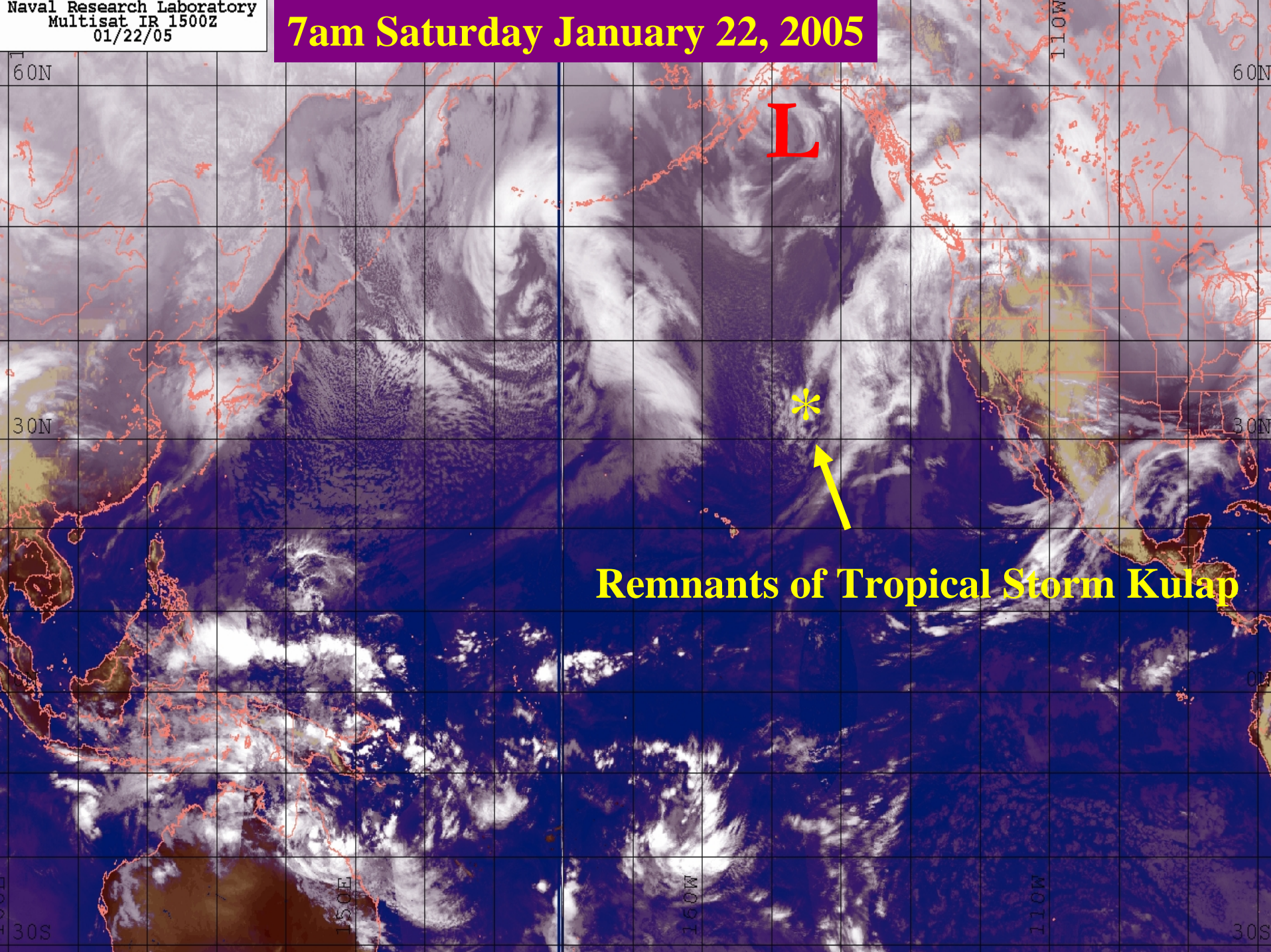


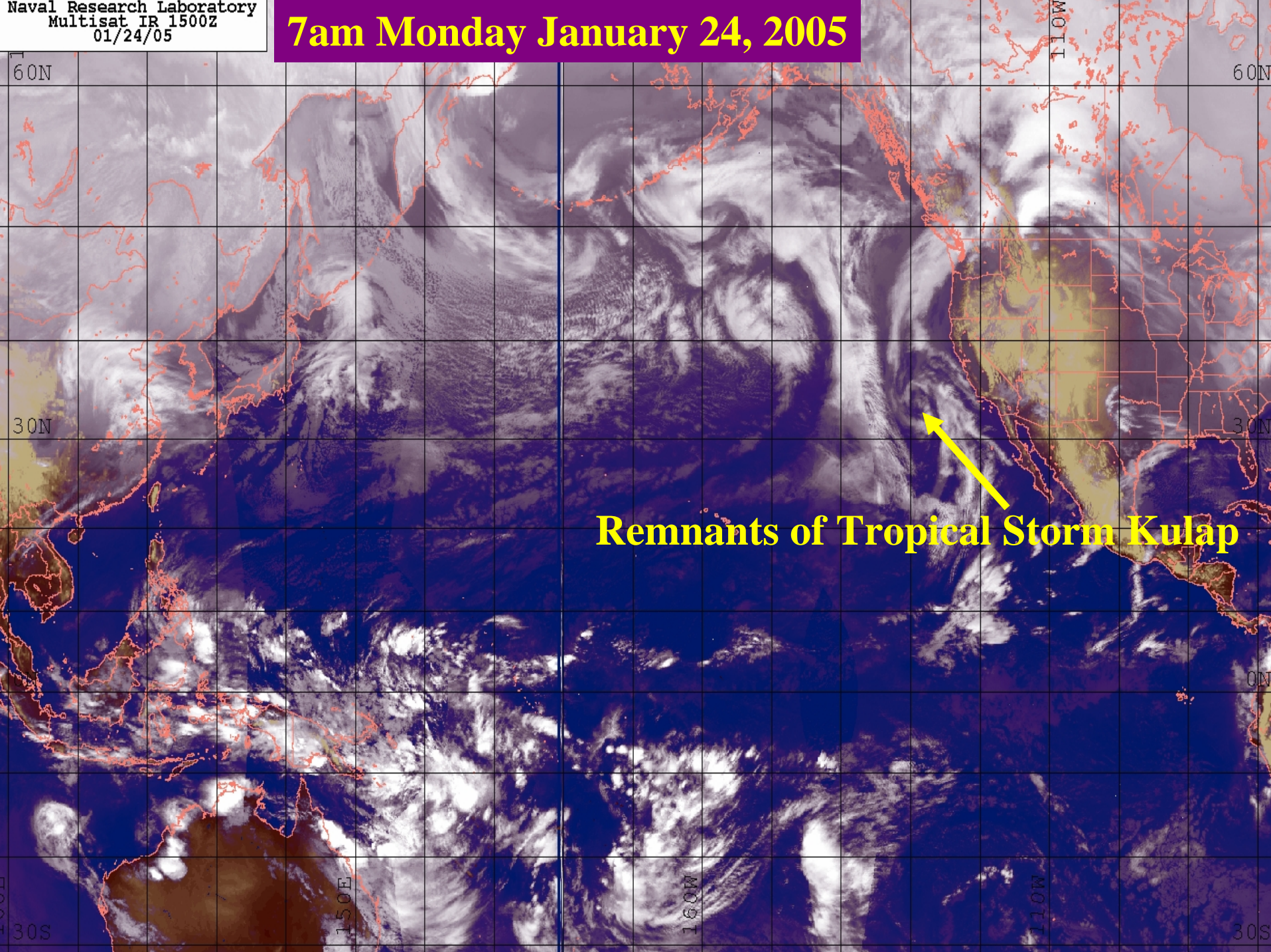
Image Reception Errors

Remnants of Tropical Storm Kulap

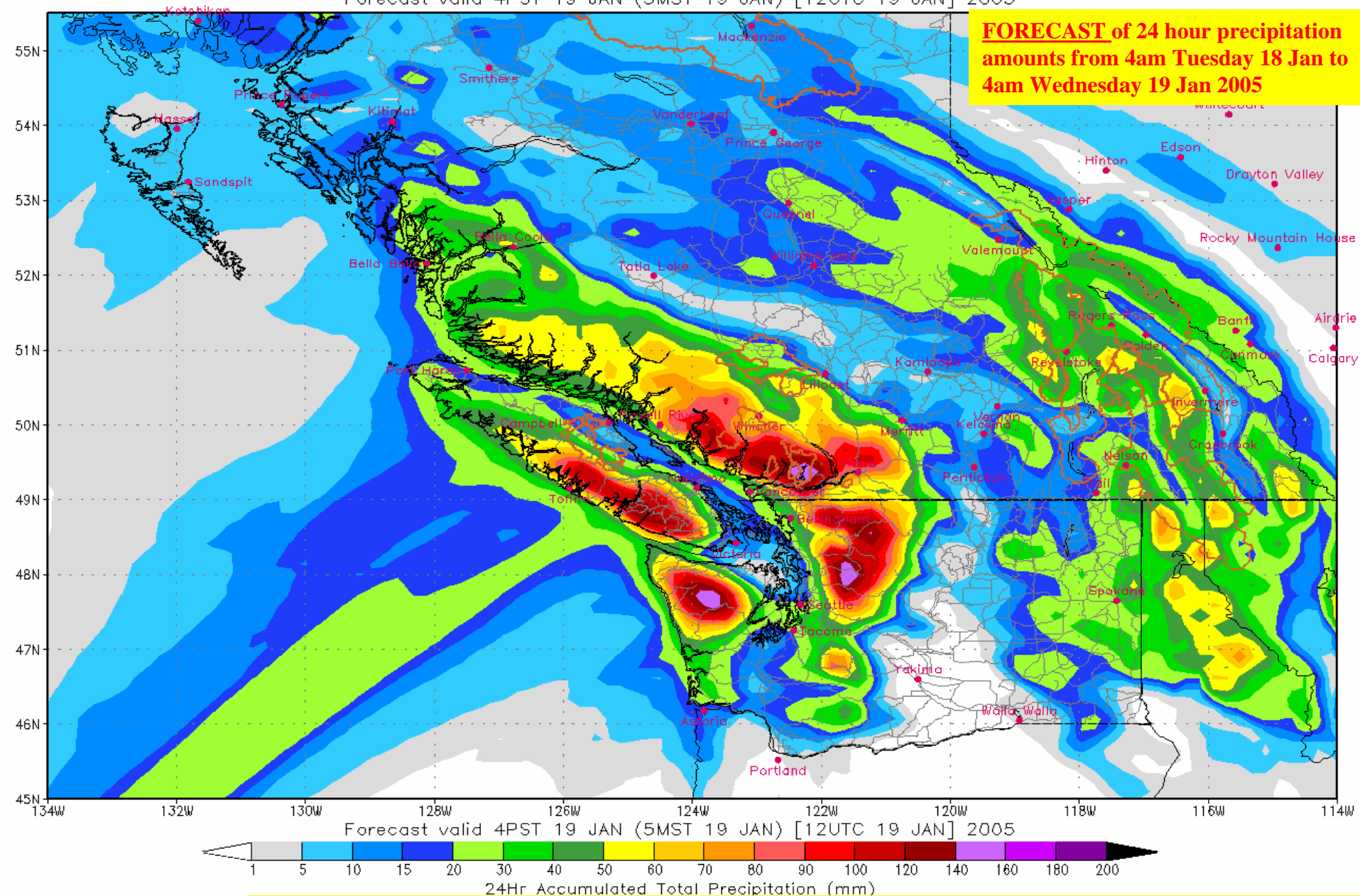
7am Saturday January 22, 2005



7am Monday January 24, 2005

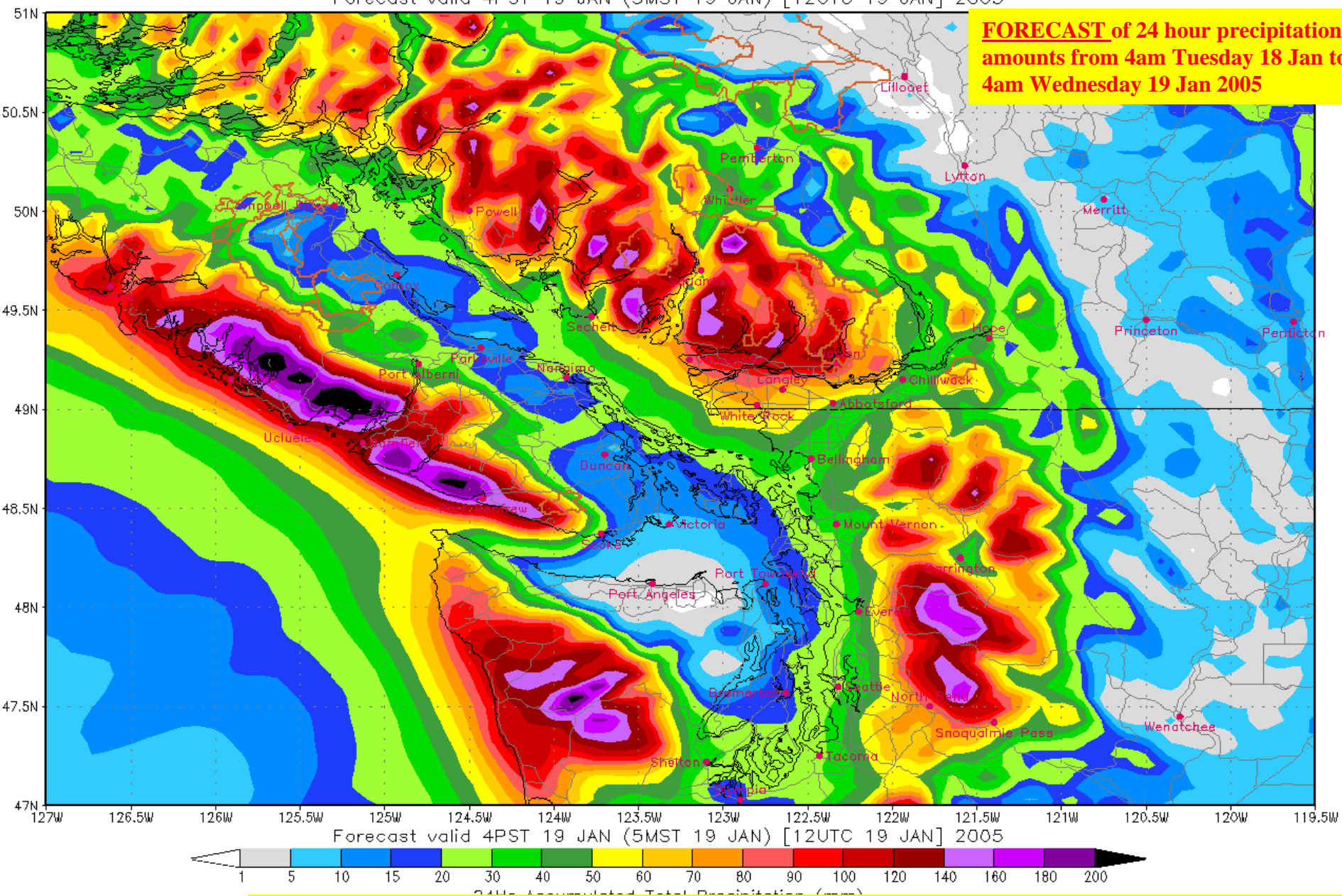


Remnants of Tropical Storm Kulap



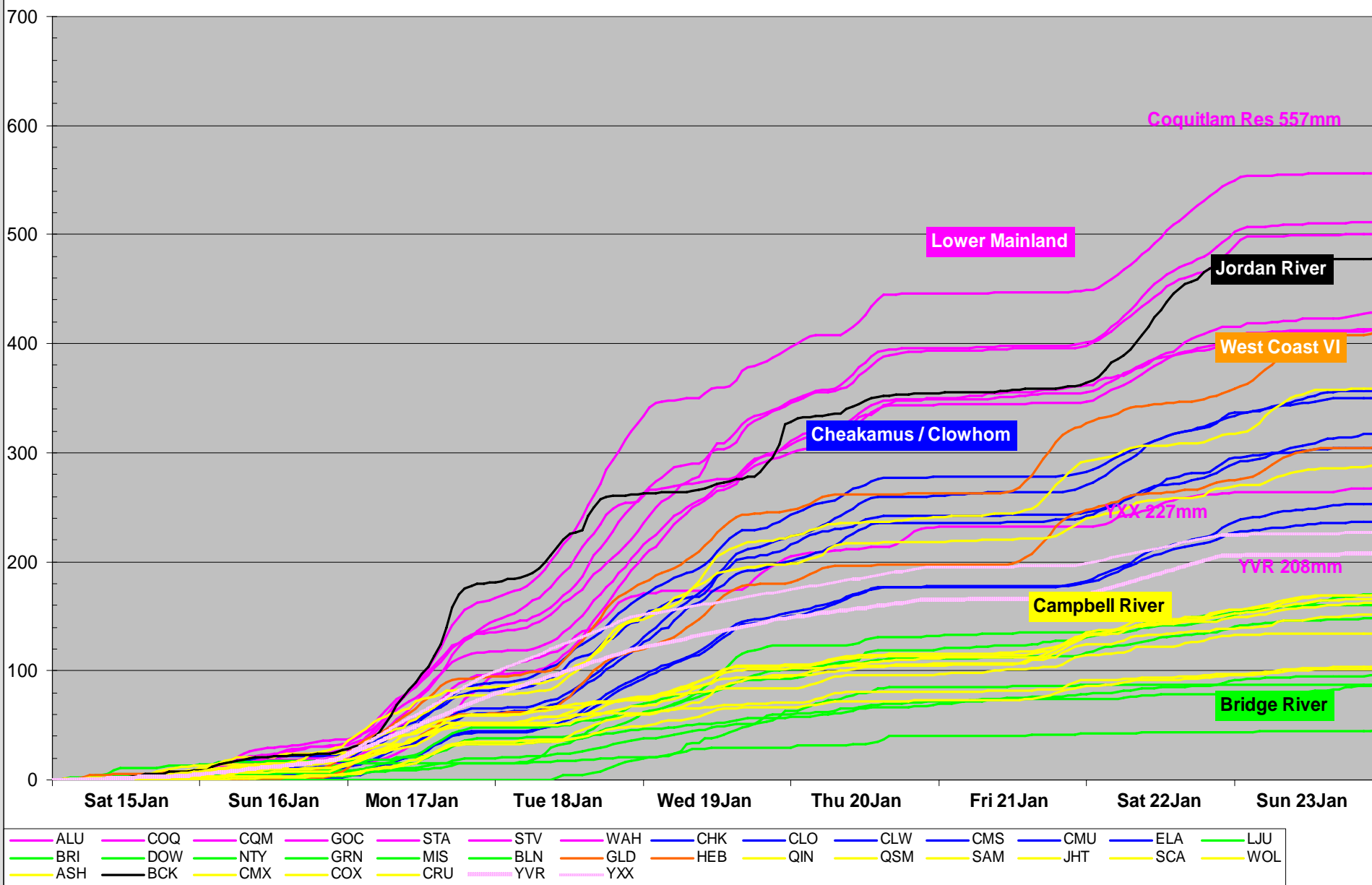
UBC Geophysical Disaster Computational Fluid Dynamics Centre, Faculty of Science, Director: Roland B. Stull

FORECAST of 24 hour precipitation
 amounts from 4am Tuesday 18 Jan to
 4am Wednesday 19 Jan 2005



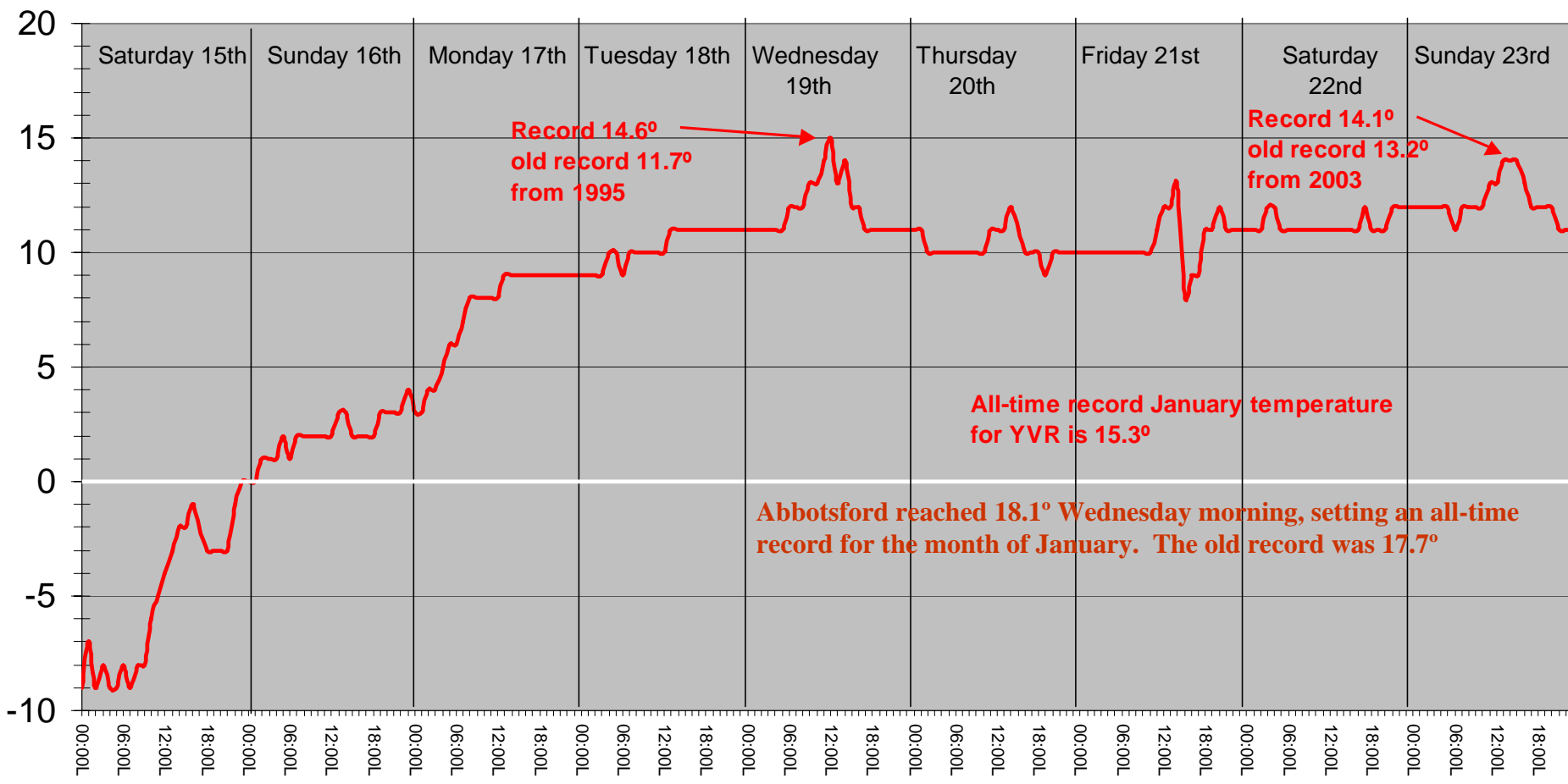
UBC Geophysical Disaster Computational Fluid Dynamics Centre, Faculty of Science, Director: Roland B. Stull

Storm Rainfall Totals Sat 15 Jan through Sun 23 Jan 2005



Let's look at temperatures during this event:

YVR Hourly Temperature January 2005



Note: Peace River, Alberta had a low/high of -39°/-30° on Thursday Jan 13
rising to -11°/+5° by Sunday Jan 23rd

Abbotsford reached 18.1° Wednesday morning, setting a record for the warming temperature recorded for the month of January. The old record was 17.7°



Several people have been taken to hospital and two are still missing after two homes were swept up in a mudslide in North Vancouver. Two houses were destroyed after the earth gave way around 3:30 a.m. When the fire crews first arrived on scene, they did a quick search and they found some of the man's limbs sticking out of the mud. The victim was transported alive to hospital.

Witnesses say the houses were swept down the hill and out into a roadway below. The houses were on a hill road above the intersection of Tree Top Lane, Chapman Drive and Riverside Drive.

Residents in about 70 homes in the area have been evacuated as a safety precaution, while a geological survey team assessed the danger to other houses.

Heavy snow and freezing rain is causing havoc with travellers in the B.C. Interior.

The Trans-Canada Highway is closed from Sicamous to the Alberta border because of avalanches.





New York City

Monday Jan 24



Washington, DC



Boston



Milwaukee



Chicago

alpinecam Thu Jan 27 08:46:11 2005



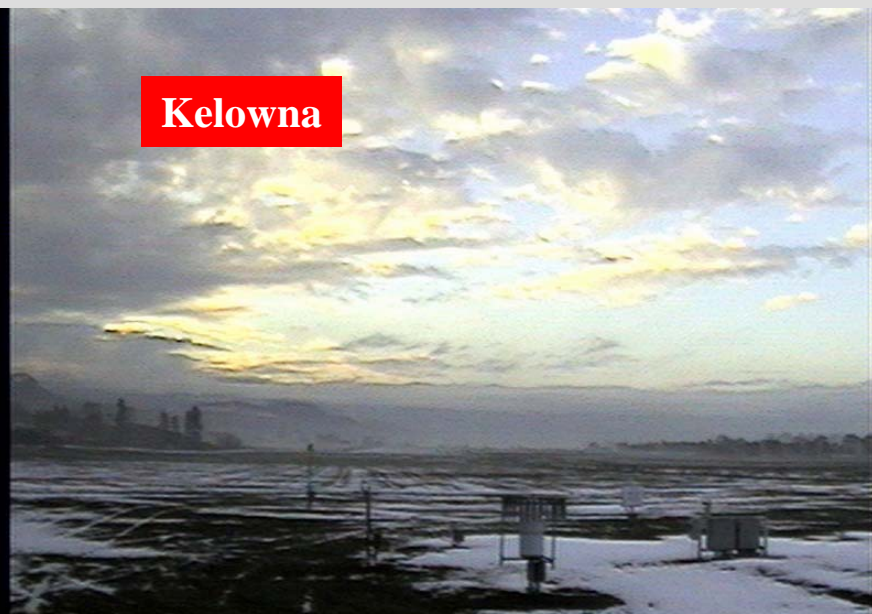
Whistler

bigwhite.com Mon Jan 24 10:35:41 2005



Big White

Kelowna

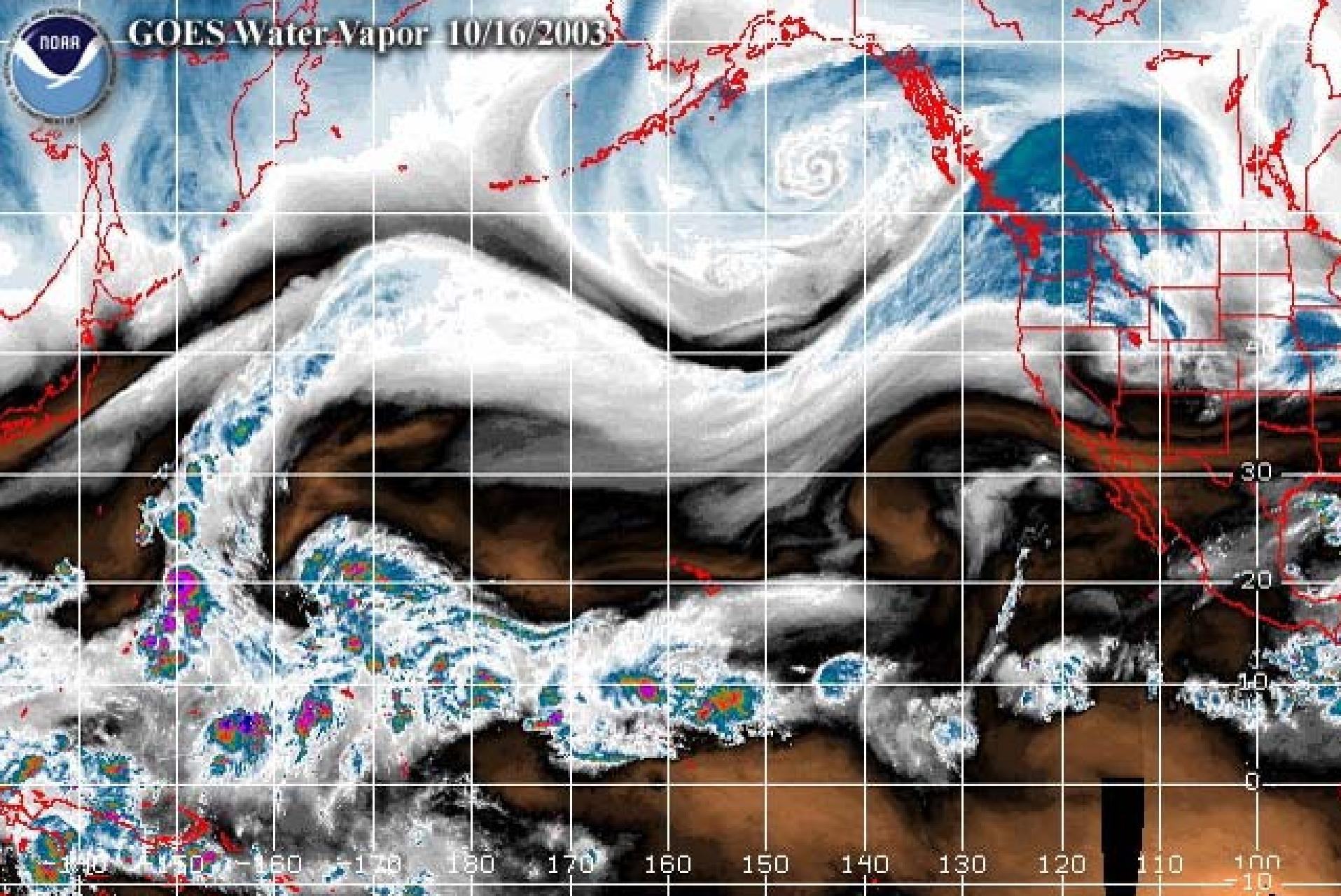


METAR CYLW 271600Z AUTO 26003KT 3 1/2SM FEW026 00/M02 A2991 RMK
SLP148=

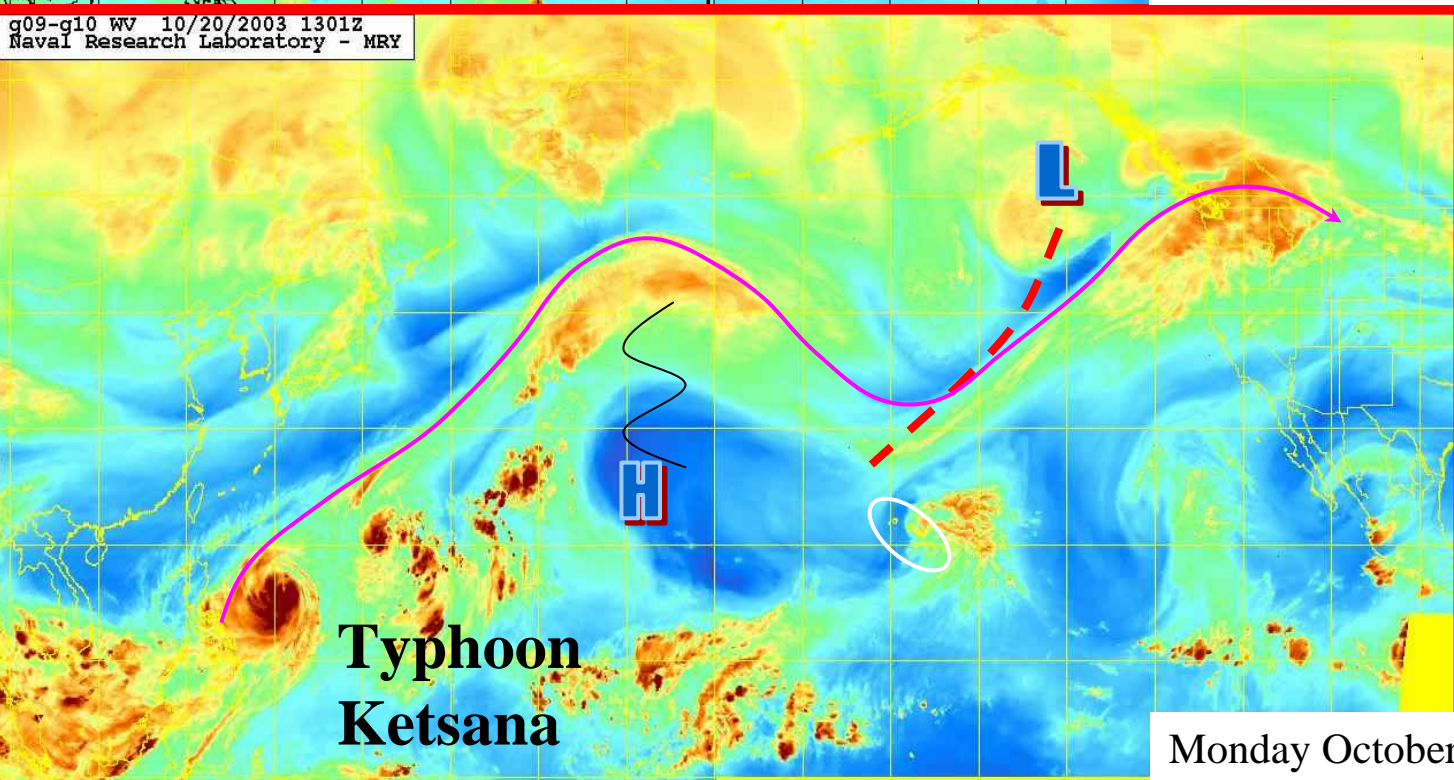
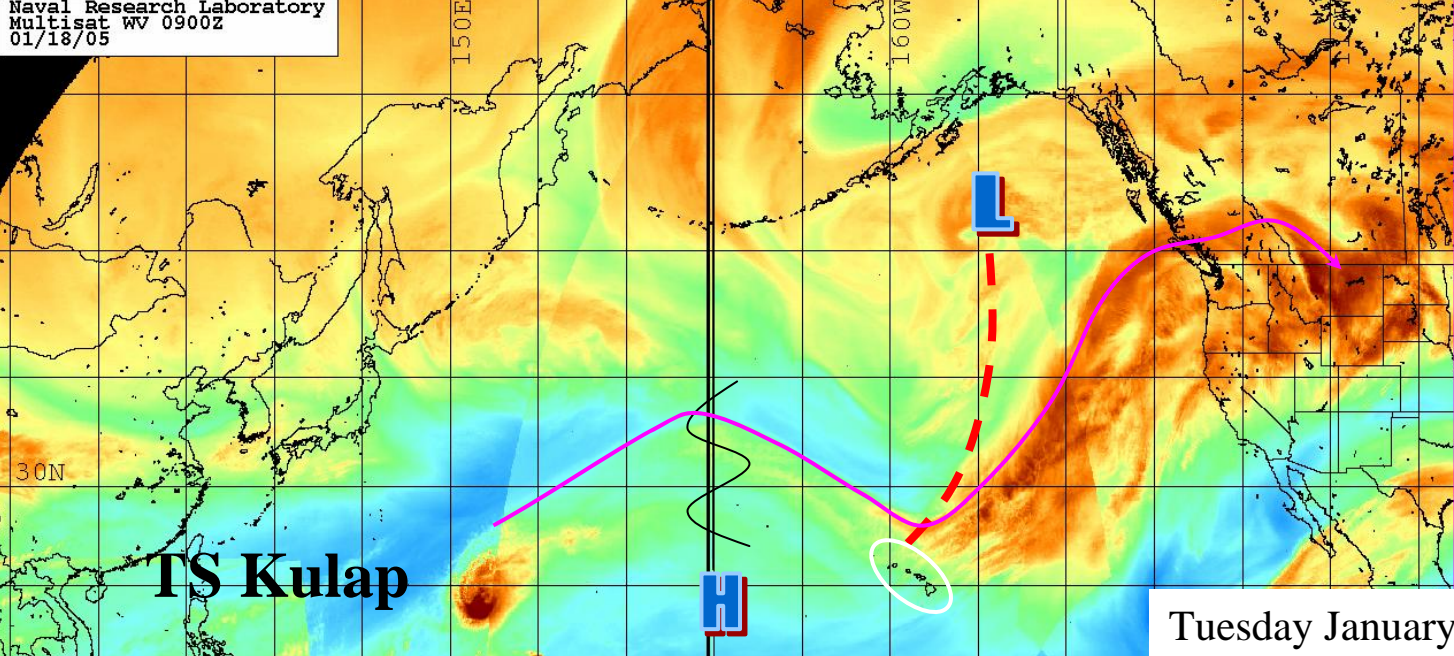
2005-01-27 16:30Z



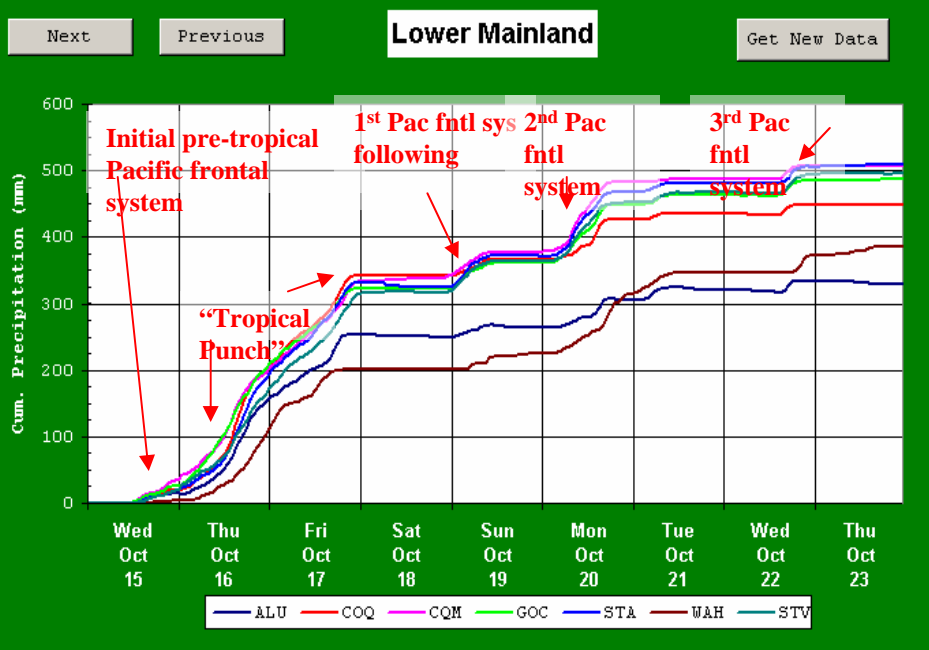
Mt. Washington



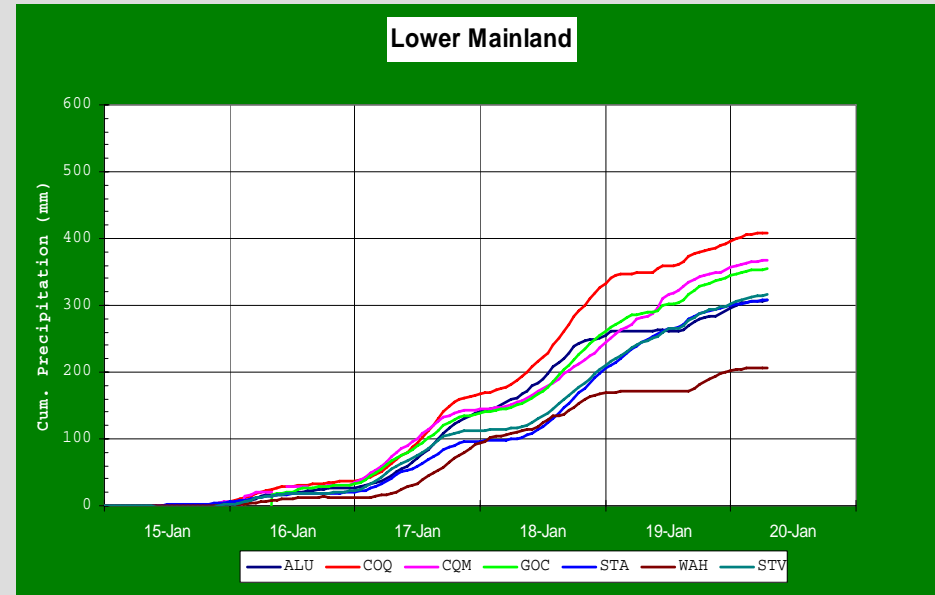
**Compare this storm with the Heavy Rainfall Event in BC mid-October 2003
that John talked about last week**



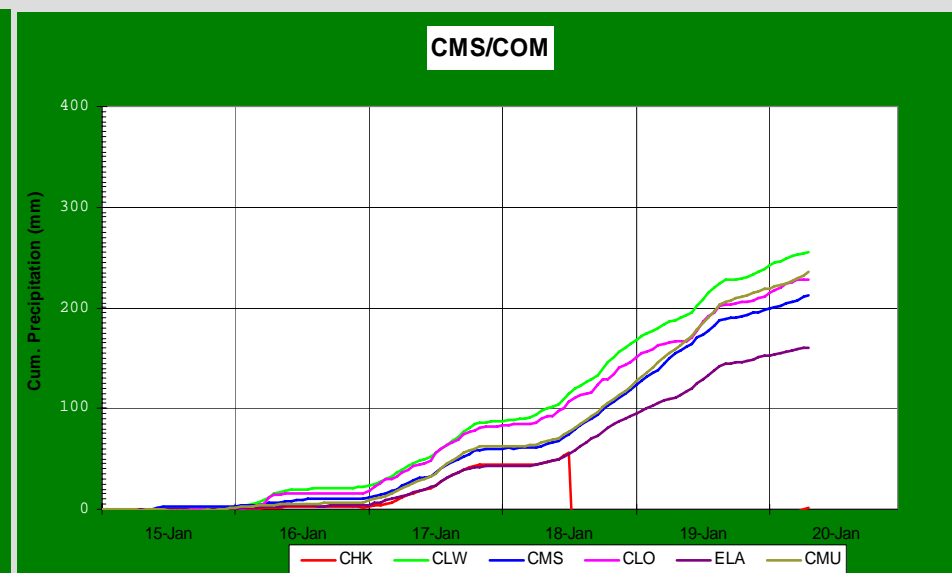
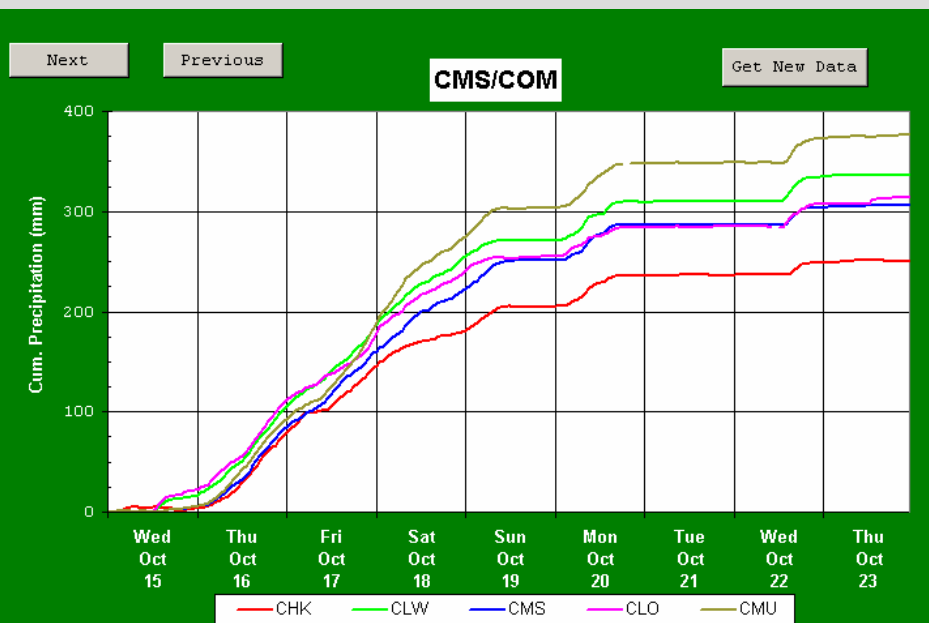
The geographical coverage and scale on these two images are the same, though it's difficult to see the background map on the lower image.



Oct 2003

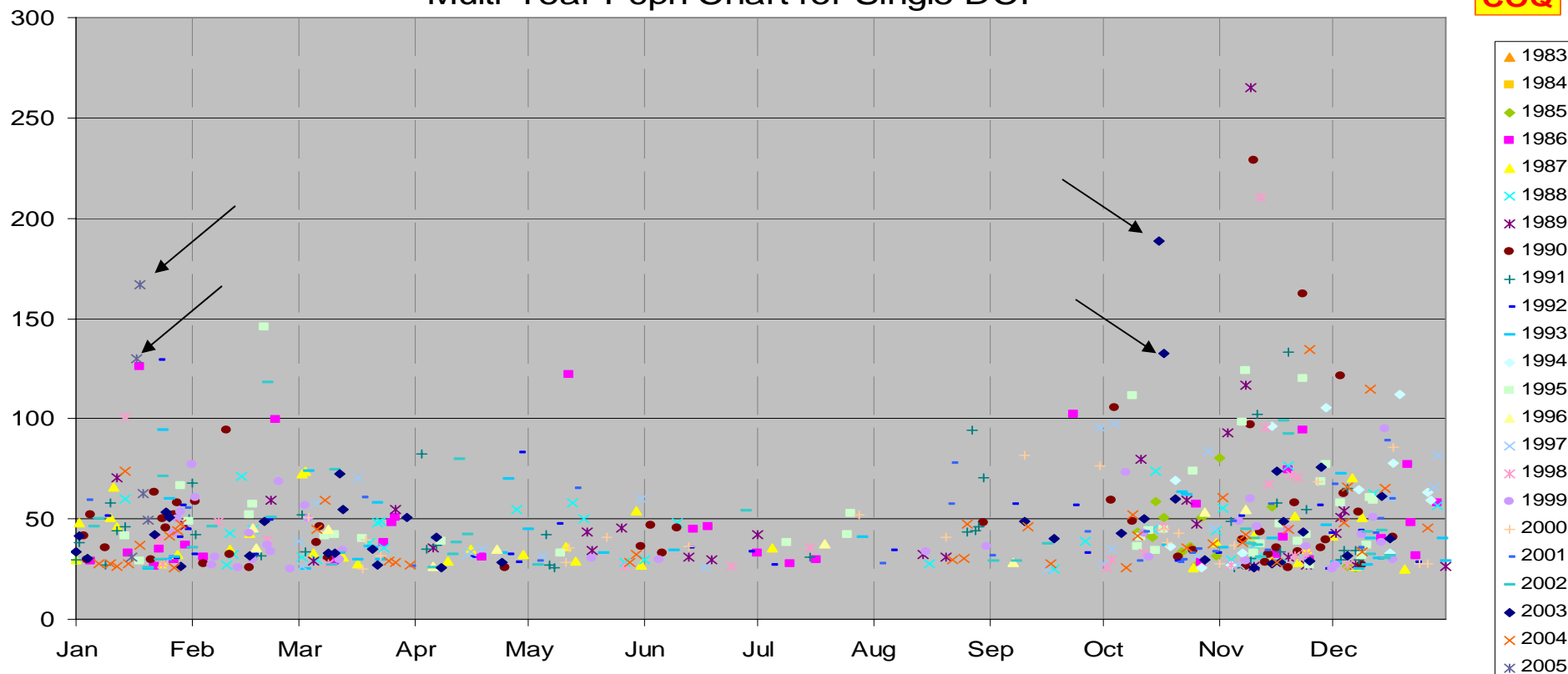


Jan 2005

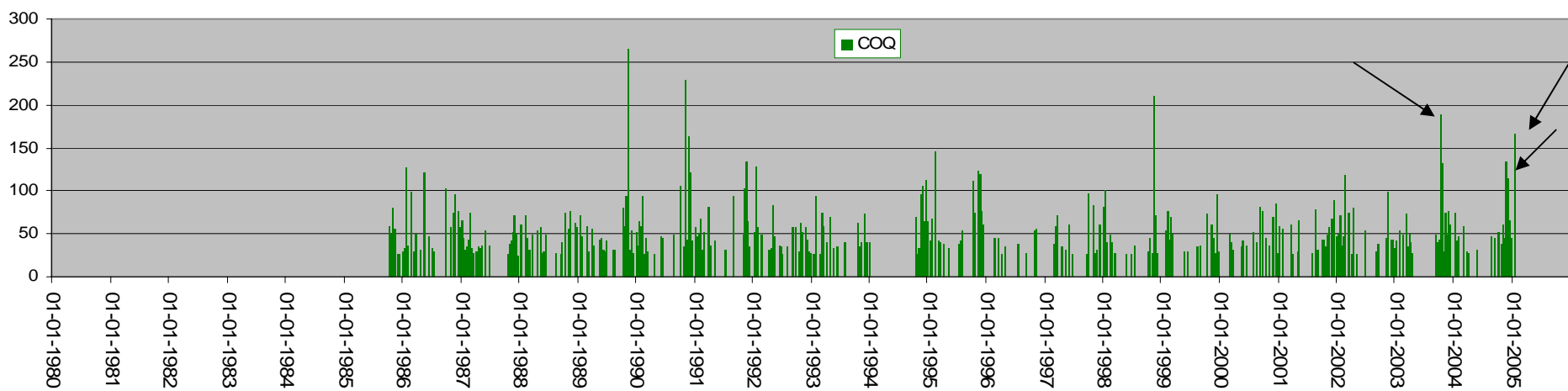


Multi-Year Pcpn Chart for Single DCP

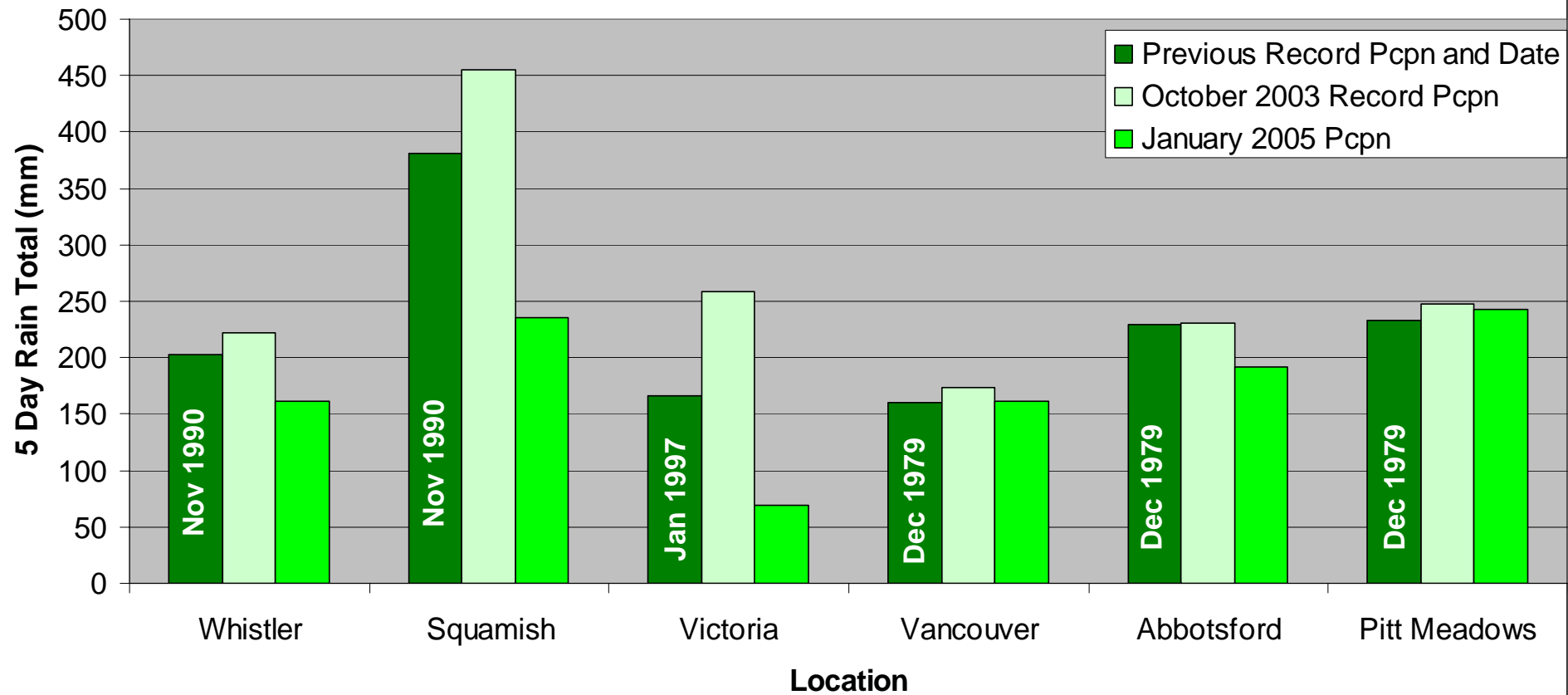
COQ



Continuous Pcpn Trace 1980 onward.. Pcpn Event > 25mm .. COQ



Summary of record 5-day Precipitation Totals (in mm of rain)



The End

Heavy Rain Event

17 to 22 January 2005

Doug McCollor